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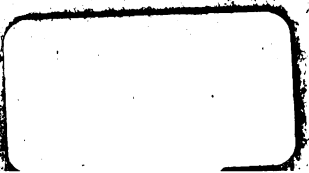
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LESSONS ON FIRE PREVENTION

For Use in Public Schools

By MISS MAMIE MULDOON
Secretary of Nebraska State Fire Commission

1913

APPROVED AND ISSUED BY
W. S. RIDGELL, Deputy State Fire Commissioner

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PREFACE

It can easily be proven that over one-half the enormous annual fire losses of the United States are due to carelessness and neglect and therefore can be avoided. Because this is true, legislators who have studied the situation have enacted laws in their different states for the purpose of reducing this great loss of life and property by fire. Nearly two-thirds of the states of the Union have now passed laws providing that the subject of fire prevention shall be taught in their schools. The subject is a most commendable and interesting one and the necessity of a text-book covering every phase of the subject has long been felt.

I am placing this book in the schools trusting it will be conducive of great good and firmly believing that if the rules and instructions herein are applied the next generation will not witness the extravagant fire losses in this country that the past generation has experienced.

It has been my purpose to cover the subject of fire prevention most thoroughly. If repetitions of the same cautions and advice have been made it has been done intentionally with a view of impressing that particular danger or precaution upon the mind of the student.

As the principle of fire prevention and the business of fire insurance are so closely allied several lessons have been written for the higher grades explaining fire insurance. A great deal of time and thought has been spent on each lesson and the explanations and instructions have been written in language thought most suitable for the different grades.

It is my earnest desire that this book may meet with the approval of educators throughout the country and that the Conservation of Life and Property from destruction by fire will appeal to every student as a branch of study worthy of their most earnest consideration.

MAMIE MULDOON.

Since the State Fire Marshal Law was enacted in 1909, the fire losses of Nebraska have gradually decreased. Fire marshal laws are now in effect in twenty-nine states of the Union and Fire Prevention Societies have not only been organized in the twenty-nine states but in a number of large cities of the country and they are doing effective work in reducing the fire waste in their respective localities.

This book compiled by Miss Muldoon, Secretary of the State Fire Commission Department, is for the purpose of teaching, not only the school children but every citizen of the state, their individual responsibility in reducing the fire losses of Nebraska.

While the annual fire losses of the United States are about \$2.50 per capita, the fire losses in European countries before the war were only about \$0.30 per capita. Probably the difference in the fire losses between this country and Europe is due to the fact that European countries have more stringent laws than we have, but American citizenship should voluntarily organize in their respective communities for the purpose of reducing the great, unnecessary and preventable fire waste that we are annually paying.

I would suggest that the school children of the state organize Fire Prevention Societies as outlined in this book, elect their own officers and communicate with the Fire Marshal's office at Lincoln, Nebraska.

Miss Muldoon, who has been connected, as Secretary, with the Fire Commissioner's office for over four years, has spent much time in compiling this book and it covers the subject more thoroughly than any other book on fire prevention that has ever been published.

If the teachers of the State of Nebraska would take an interest in teaching this important subject to their pupils they would find at the end of the school year that the fire waste would be materially decreased in their respective cities and towns.

Very truly yours,

W. S. RIDGELL,

Chief Deputy Fire Commissioner.

INTRODUCTION

To School Boards and Teachers of Nebraska:

At the thirty-second session of the Legislature of Nebraska a law was enacted establishing a "Fire Day," and provisions were made for its observance.

The loss of life and property has been so great the past few years that many states have made laws regulating the use of inflammable substances which tend to lessen the disasters caused by fire. Nebraska has awakened to the fact that to reach the highest efficiency in any undertaking the children of the state must be aroused to see the need of the movement contemplated.

The law requires that thirty minutes be devoted to the subject of fire dangers each month. The plan of this text-book is such that every school may be teaching a similar subject at the same time, thus making a uniform crusade against "Fire Dangers."

The "State Fire Day" as fixed by law is the first Friday in November, and there shall be appropriate exercises for the day on the subject. Fire drills are recommended as a part of the special day program.

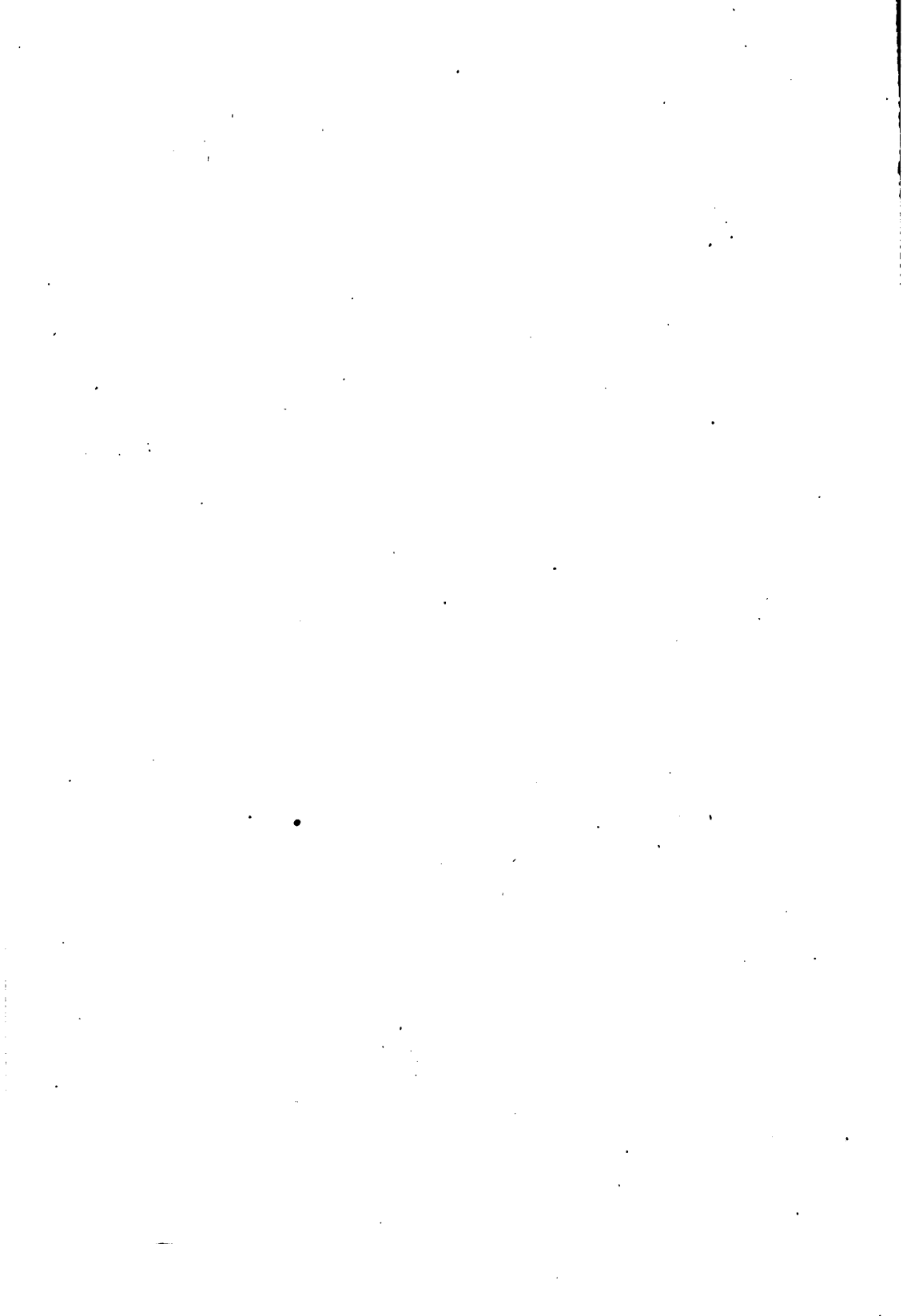
We suggest that the program be arranged to arouse an interest in the law and its enforcement. Each teacher should select appropriate songs and recitations suitable for the day. Have compositions written on some of the fire dangers.

Teachers should have pupils clip from papers all notices about fires and classify them according to the different lectures in the text-book. A report should be made on the clippings for the information of pupils and parents.

We trust school boards, teachers, parents, and pupils will so interest themselves in the study of "Fire Prevention" and in the "Special Fire Day" program that excellent reports may be made on the results of the combined efforts to lessen fire disasters.

JAMES E. DELZELL,

State Superintendent of Public Instruction.



KINDERGARTEN, FIRST AND SECOND GRADES

LESSON 1.

Never Play With Matches.

Don't ever take a match
When you go out to play;
It is a thing most rash
And sure to bring dismay.

For if you play with fire
'Twill burn you sure some day,
And cause you losses dire,
Yourself or others slay.

QUESTIONS.

Is it wrong to take matches with you when you go out to play?
What will it bring you? What will happen if you play with fire?
What else will fire cause? Do good children obey? What is the
advice given in this lesson?

LESSON 2.

Danger of Playing With Matches.

Every child old enough to attend school knows right from wrong,
and of course every little boy and girl is good unless they do some-
thing wrong and disobedient; then we know they are naughty.
Perhaps you are not old enough to know when certain things are

wrong until you are told about them by older people, but when you know they are wrong from your own intuition or are told by your parents and teachers that you should not do certain things, and then continue to do them, you are very bad indeed.

We are going to tell you now what a very wrong and dangerous thing it is to play with fire and matches, and we hope no child will ever play with them again.

You should no more think of playing with matches than you would with a great, cross, wild bear. The match will hurt you just as badly as the bear would if you give it a chance. It will start a blaze when you light it, and the flame will catch on your clothes and burn and eat them up and then eat into your flesh until you are all consumed. To be burned is much worse than to be bitten by a wild animal.

You should never go to the match box when your parents are away from home or without their knowledge. Even if you find matches on the table or lying carelessly around you should take them and put them away in the match-box or some safe place. You must not use them. If a fire is to be started or a lamp lighted ask some older person to do it for you. Do not try to do it yourself.

QUESTIONS.

Do even young children know right from wrong? Is it dangerous to play with matches? Is it dangerous to play with fire of any kind? Would good, obedient children ever play with fire or matches? Will matches hurt you if you play with them? Would they hurt as much as a great, cross, wild animal? How do they hurt you? What should children do if they find matches lying carelessly around? Should small children light lamps or fires?

LESSON 3.**The Busy Bee and the Naughty Elf.**

One day a sprightly little elf
Said, "Just a match I'll take,
I can jump and reach the shelf
And then a fire I'll make.

"I cannot hear a sound
So I'll do as I please,
For no one is around
Except the busy bees."

Now a little bee chanced to hear,
And he knew this naughty elf:
"Some damage he will do I fear,
So I'll 'tend to him myself.

"See him on the window sill
Trying to make a light;
That naughty elf some one will kill,
I must put him to flight.

"I'll make him drop that match
Or else a fire there'll be.
I hope a whipping he will catch,"
Thus spake the little bee.

And then he flew right at the elf,
And cried, "You naughty thing,
You took that match from off the shelf
Your hand I'm going to sting."

He bit the naughty elf so hard
That he cried out with pain,
The bee flew back into the yard
To see his friends again.

QUESTIONS.

What did the little elf say? What did the good little bee say? What did the good little bee do? Was it right for the little busy bee to punish the elf for being naughty?

LESSON 4.**Christmas Tree Cautions.**

Children should never try to light the candles on a Christmas tree. They should never touch the tree when the candles on it are lighted. Wait until your parents or Santa Claus give you the presents off the tree. Do not light the little candles, either before they are put on the tree or after they are taken off. Do not reach up to touch anything on the tree, for you might upset it and burn yourself and set fire to the house. Tell your parents to always place a bucket of water near the lighted Christmas tree, so in case a fire should start from any cause they can put it out quickly.

Don't touch a lighted Christmas tree
At home or any place you go,
For if a little flame so free
Should touch a toy the fire would grow,
And maybe make a great big blaze.
And burn you and everything around
And make so sad this merriest of days,
When only joy and gladness should abound.

QUESTIONS.

Should children ever try to light the candles on a Christmas tree? Should they touch the tree when the candles are lighted? Is it wrong to light the candles even when they are off the tree? What would happen if a little flame should touch the tree or a toy?

LESSON 5.**Dreadful Story of Pauline and the Matches.**

By Dr. Henry Hoffman

(This is the story of a disobedient little girl who played with matches.)

“Mama and Nurse went out one day,
And left Pauline alone to play.
Around the room she gayly sprang,
Clapped her hands, and danced, and sang.
Now, on the table close at hand,
A box of matches chanced to stand,
And kind Mama and Nurse had told her
That if she touched them they would scold her,
But Pauline said, “Oh, what a pity!
For when they burn it is so pretty;
They crackle so, and spit, and flame,
And Mama often burns the same.
I’ll just light a match or two
As I’ve often seen my mother do.”

When Minz and Maunz, the pussy-cats, heard this,
They held up their paws and began to hiss.
“Me-ow!” they said, “me-ow, me-o!
You’ll burn to death, if you do so,
Your parents have forbidden you, you know.”

But Pauline would not take advice,
She lit a match, it was so nice!
It crackled so, it burned so clear,—
It pleased her eyes, it pleased her ears.
She jumped for joy, and ran about,
And was too pleased to put it out.

When Minz and Maunz, the little cats, saw this,
They said, “Oh, naughty, naughty miss!”
And stretched their claws,
And raised their paws;

" 'Tis very, very wrong, you know;
Me-ow, me-o, me-ow, me-o!
You will be burnt if you do so,
Your mother has forbidden you, you know."

QUESTIONS.

What did Pauline do when her mother and nurse left her alone?
What did she see on the table? What had her mother and nurse told her?
What did Pauline say? What did the kittens say? Did Pauline take their advice?
What did she do? What did the pussy-cats tell her again?

LESSON 6.

Dreadful Story of Pauline and the Matches—Continued.

"Now see! oh see! what a dreadful thing!
The fire has caught her apron-string;
Her apron burns, her arms, her hair—
She burns all over, everywhere.

Then how the pussy-cats did mew,
What else, poor pussies, could they do?
They screamed for help, 'twas all in vain;
So then, they said, "We'll scream again,
Make haste, make haste! me-ow! me-o!
She'll burn to death,—we told her so."

So she was burnt with all her clothes,
And arms and hands, and eyes and nose;
Till she had nothing more to lose
Except her little scarlet shoes;
And nothing else but these were found
Among her ashes on the ground.

And when the good cats sat beside
The smoking ashes, how they cried!
"Me-ow, me-o! Me-ow, me-oo!
What will Mama and Nurse do?"
Their tears ran down their cheeks so fast,
They made a little pond at last.

QUESTIONS.

What did the fire from the match do? What did the pussy-cats do? What did they say? What happened to naughty Pauline? What did Mama and Nurse find of Pauline when they came home? What did the cats do? Would Pauline have been burned if she had obeyed her Mama and the kittens?

LESSON 7.**The Little Birdies' Home in the Chimney.**

Once two little birdies, building in the spring,
Thought a nest down in the chimney would be just the thing;
So they gathered twigs and boughs and heather,
Some string and hay, and wove them all together.

A nice old lady bird was flying by,
Saw the pretty nest of eggs, the color of the sky,
She shook her head and to the little birdies said,
"A nest built in the chimney fills my heart with dread.

"You know a little fire, or just a little spark,
All red with heat coming up through the chimney dark,
Will set your pretty nest on fire, your eggs, or birdies burn,
I am old, I understand, from me a lesson learn."

The birdies only shook their heads.

"Don't be afraid; no fire will come up here," they said.
The dear old lady bird then flew away so sad,
Saying, "I hope they will not burn, 'twould be too bad."

That night when lady bird was fast asleep,
The man down stairs so much coal in his stove did heap,
That sparks came flying out of the chimney top;
The little birdies awoke and cried, "Stop! Stop!"

But the man didn't hear, and the sparks came so fast,
The birdies had to leave their eggs and fly away at last;
For the sparks set fire and burned up the eggs and nest;
The birdies cried and said, "Old lady bird knew best."

“We should not build our nests in chimneys dark
In the future, to advice of older birds we'll hark,
And folks should not fill their stoves so full of coal—
Some time the house may burn by sparks from the chimney hole.”

Now, children, don't be like the foolish birds;
Old heads are wisest, do hearken to their words;
Don't play with bonfires, matches, stoves, or gasoline,
It is so very wrong, even if you are not seen.

QUESTIONS.

What did the little birdies do? What did the old lady bird say to them? Were the little birdies afraid their nest would take fire? What happened one night? Is it dangerous to fill stoves too full of coal? What should little children always do?

LESSON 8.

Children Should Never Play With Matches.

We know of a little boy who wanted to make a fire in the kitchen stove while his mother was visiting neighbors. He put a lot of paper in the stove, then stood on a chair to reach the match-box, took out a couple of matches, struck one, and threw it in the stove; it went out and he tried another. This one blazed up quickly, the paper took fire, and the flame from the paper leaped up and caught hold of the little boy's thin waist sleeve. Before he knew it his whole waist was on fire. He ran out doors crying; his mother heard him and ran as quickly as she could to help him, but before she could put out the fire he was burned so badly that he will be scarred forever. His mother was badly burned on the hands and face while trying to save him. If this boy had been a good child he would not have suffered himself or caused his mother so much pain and suffering. Good, obedient children never play with matches.

QUESTIONS.

What did a little boy do when his mother was away from home? What happened to him? What happened to his mother? Do good,

obedient children ever play with matches? Would they attempt to start a fire in a stove when their parents were away?

LESSON 9.

Toy Stoves Are Very Dangerous.

We have seen for sale in the stores and toy shops little stoves for children where they can make real fires; the stoves having lids, etc., upon which to place tin pans, pots, and kettles. This is a wicked invention. Children so small that "playing house" appeals to them should never be enticed and coaxed into the temptation of using matches and lighting play fires. Little cotton and muslin dresses and kilts take fire so easily. The children must have matches to start the fires in these stoves, or, worse still, carry lighted paper or sticks of wood from stoves in the kitchen. How many innocent little lives and valuable property are placed in danger by parents who would resent being called careless, and yet they deliberately and intentionally buy these stoves and place them in the hands of their children. Many beautiful homes and precious lives are lost by just such dangerous toys.

Nice, sensible little boys and girls who want to grow up to be good, careful men and women will never ask for such a dangerous plaything, and even if their parents ask them if they want play stoves to light real fires in they must say, "No, papa and mama, I do not want a stove to make a fire in, because my teacher says it may burn you and me and our pretty home, too." Surely, after all the time spent in preparing these lessons for you, and after all the patience given by your teacher in trying to impress upon your young minds the folly of handling and playing with fire, you will not use matches or fire to light toy stoves.

QUESTIONS.

Are toy stoves dangerous to play with? Why? Do little dresses and kilts catch fire easily? Are children and houses ever burned by fire from toy stoves? Do good children want such dangerous playthings? Should you ever ask for them? If your parents ask you if you want them what should you say?

LESSON 10.**Fourth of July Cautions.**

Don't be naughty on the "Fourth,"
And shoot off fireworks bad,
It is our glorious Independence Day,
And should be celebrated by every girl and lad
In a manner good and glad.

Fireworks burns up lives and homes,
And should never by our boys be used,
Our little girls and big people, too;
The Glorious Fourth should not abuse
By using fireworks to amuse.

There are so many safe, good ways,
Of having fun and pleasure sane,
Why should we try our lives to lose,
Ourselves to kill, our friends to maim,
When we might play some harmless games!

Fireworks have been known to cause
More destruction than an army's raid.
They cause such loss of life and damage,
Such dangerous things ought never be made,
We hope their use in our land will fade.

Every Fourth of July hundreds of dollars' worth of property is destroyed by fire and many lives lost. Children are burned to death, their eyes blinded, and fingers and hands blown off or otherwise crippled for life. Do not let any one coax you to handle fireworks. Tell your parents not to buy or use them. Play games on the Fourth and have a good time without using any fireworks.

QUESTIONS.

What is the Fourth of July? How should it be celebrated? Are fireworks dangerous? Do they burn and hurt people and property? Are lives lost every Fourth of July through the use of fireworks? Should you ever handle or use fireworks? What should you tell your parents?

What Happened to Ten Little Children.

Ten little children, dressed nice and fine,

Played with matches in a barn,

Then there were nine.

Nine little children, out pretty late,

One found a firecracker,

Then there were eight.

Eight little children aged about eleven

One played with a bonfire,

Then there were seven.

Seven little children in an awful fix

For one upset a Christmas tree,

Then there were six.

Six little children, sure as you're alive,

Tried to start a fire with coal oil,

Then there were five.

Five little children, playing on the floor,

One struck a parlor match,

Then there were four.

Four little children nice as they could be

One let a lamp fall,

Then there were three.

Three little children all dressed in blue,

One held a candle near her dress,

Then there were two.

Two little children having lots of fun

One fell in the open fireplace,

Then there was one.

One little child no harm had ever done,

Watched his mother clean with gasoline,

Then there was none.



THIRD AND FOURTH GRADES

LESSON 1.

Temper of the Match.

I am coming today a lesson to teach
Of the little cheap match which we use,
To kindle our fires, to light our lamps
And which we so often abuse.

The match was made a fire to start
And heat and light for our use to impart.
We need hundreds every day
In our work, but never in our play.

The match knows this, it knows 'twas made,
For service and to help mankind;
So it is always ready
And when we order it will mind.

But when bad children take the match
And carry it out to play;
It makes the match first sad, then mad
And it gets cross and ready for a fray.

And when the children strike it,
It blazes up strong and hard
And scatters fire and flame about
And they can not put it out.

QUESTIONS.

What was the match made for? Do we need many of them?
When do we need them? Does the match know what it was made
for? What does the match do when children play with it?

LESSON 2.

Matches Do Not Appear Dangerous.

The match is one of the most useful articles we have in general use. Without matches we could hardly get along in our every-day life as we live it today.

The match is such a simple and harmless looking article, a little strip of pine wood about two inches long, but on one end of the little piece of wood there dwells a deadly weapon, so fiery, so fierce and fatal, that if it touches even the tips of your fingers after you have struck it and made it light it will make you cry with pain. When you strike the head of a match it suddenly springs into life, and as if mad at being disturbed flies at you or at any object it can reach with anger and malice. It is the most destructive article of its size manufactured. It is as deadly and destructive as a gun or revolver, and children should be just as afraid of using matches to play with as they would be of using guns.

Any boy in this class who carries matches in his pockets or plays with them at all should be punished, and any little girl who would have matches in her possession ought not to be allowed to play with good children, for she is a dangerous playmate.

By playing with matches children destroy thousands of dollars' worth of houses and buildings every year, and hundreds of lives are lost in this way. Children take matches from their homes without the knowledge or consent of their parents, and they play house with them, make bonfires, light fires in stoves, light lamps or candles, or just strike one match after another to see them burn; any of these acts are wrong. Small children should not even light a lamp or candle.

QUESTIONS.

Is the match a useful article? Does the match look dangerous? Is it dangerous? What will it do if you strike it and let it touch your fingers? Is it as dangerous as a gun or revolver? Should children ever carry matches around with them or in their pockets? Do children and matches cause much damage? Should small children be allowed to light lamps or candles?

LESSON 3.**Always Dangerous to Play With Matches.**

Some children may think it is wrong to play with matches in the house, but think it is all right to play with them out of doors. Matches in the hands of children are always dangerous, no matter whether used indoors or out of doors.

One day children took matches and went out to play in their father's barn. They were lighting the ends of long pieces of straw and holding them in their mouths to pretend they were smoking. They did not notice a lighted match fall and set fire to the straw and start a blaze. When they did notice the fire they could not put it out, and they had to run away to save themselves. Their father's nice valuable horse and barn and everything in it was burned to the ground. He lost hundreds of dollars just because disobedient children played with matches. They ought to be severely punished.

QUESTIONS.

Should children use matches anywhere, even out of doors? Tell how disobedient children set their father's barn on fire. What ought to be done with them?

LESSON 4.**Danger of Lighted Christmas Trees.**

Christmas trees are the cause of numerous fires. Everything used in decorating a Christmas tree is of such a flimsy and inflammable character that it will blaze up in a minute if fire touches it. The bright gaudy balls and ornaments are often made of celluloid which will explode even from the heat of a candle burning too close to them. The gifts should all be placed upon the tree before the candles are lighted and the candles should be put out before the gifts are taken

off. The Christmas tree should never be left alone while the candles are burning. Someone should stay in the room at all times, for if a little blaze should start from any cause it would burn so quickly that if someone was not right there to put it out the whole room would be on fire in a very short time. Children should never be allowed to touch the tree while the candles are burning. Keep all drafts and gusts of wind from the tree. Do not use tissue paper, or cotton batting or celluloid ornaments for decorations. If people insist upon using inflammable decorations they should refrain from using candles. The room is always brilliantly lighted and it is not necessary to have candles. The tree itself will catch fire and burn quickly when the needles become dry.

There is a material called asbestos which is a mineral and mined from the ground like gold or coal. It is non-combustible and will not burn. It is used on stages for the large curtain and this curtain when let down will prevent fire from passing through it either from the stage to the body of the theatre, or from the body of the theatre to the stage. It is also used to cover furnace pipes in basements and for numerous other fire preventing purposes.

Instead of using cotton on the floor under the Christmas tree to represent snow tell your parents to buy asbestos fibre or mineral wool. This will represent snow on the floor and decorate the tree just as well as the dangerous cotton. Santa Claus should wear a mineral wool beard and wig. A bucket of water should always be placed beside the Christmas tree to be used in case of fire.

QUESTIONS.

Do Christmas trees ever cause fires? Are the things used to decorate Christmas trees usually of an inflammable nature? Should the presents be put on the tree before the candles are lighted? Should the candles be put out before the presents are taken off? Should someone always stay in the room where the Christmas tree is located while the candles are burning? Why? Should children touch the tree while the candles are lighted? Is it wrong to have the wind blow on the tree while the candles are burning? Tell what should be used on the tree. Will the tree itself burn? What is asbestos? Will it burn? What is it sometimes used for? What are you going to tell your parents to use it for? Why should a bucket of water always be kept near the Christmas tree?

(Note: We recognize the fact that this lesson is rather advanced for pupils in the third and fourth grades, but as children of this age are the ones who usually have Christmas trees in their homes we think the lesson should not be deferred until a higher class is reached. We would suggest that the children be asked to copy this lesson in full—more than one day can be given to it—and take it home and ask their parents to read it. They can be appealed to as acting as little “Fire Marshals” and “Fire Preventers” and can really do a good work along these lines in calling their parents’ attention to these various home dangers.)

LESSON 5.

Danger Lurking in Bonfires.

Now children always try
By every word and deed
To let those around you see,
How your teacher’s words you heed.

You can prevent so many fires
By saying to everyone aloud
“We are the little Fire Preventers
Won’t you come and join our crowd?”

Each little Fire Preventer
So many little lives can save,
For they must not play with fire,
If they join this good brigade.

Children should never be allowed to make or play around bonfires. They must not be allowed to make bonfires in yards or alleys, or any other place for that matter; they must not even poke the fires, or carry rubbish, weeds, etc., to throw on the blaze. Small bonfires often get beyond the control of men and women, and are beyond all dispute a very dangerous pastime for children.

A little girl about eight years old, with her two smaller sisters, made a bonfire near their pretty home. They were running and play-

ing around it, throwing on weeds and pieces of wood, etc., and having lots of fun. The older of the little girls kept warning her younger sisters not to get too close to the fire, when suddenly the poor child herself stepped too near the flames—they reached out fiercely and caught hold of her thin summer dress and in a moment she was a mass of fire. She ran screaming home and into her mother's arms. Her parents smothered out the fire as quickly as they could and took her to a hospital where she would have the best of care, but alas! the little body was burned so terribly that after suffering all night she died in the early morning.

QUESTIONS.

Should children ever make bonfires? Can bonfires always be controlled even by grown people? Are they dangerous? What happened to a little girl who played around a bonfire?

LESSON 6.

Damage Done By Children Playing With Bonfires.

Once a little child so small
Said to her playmates dear,
“Let's make a BONFIRE here and play.”
She never fire did fear.

They agreed and piled up weeds
And wood and papers high,
Until it made a great, big blaze
That almost reached the sky.

The boys and girls laughed with glee
To see the fire burn hot,
But look! their laughter turns to fear,
The flames Clare's dress have caught.

Tom took his coat and wrapped her round
And smothered out the flame;
Haply her flesh it was not burned
She was not scarred or lame.

But while they were saving Clare
The fire had leaped along so fast
Until it reached the grocery store
Of poor old Mister Plast.

The children now so frightened
Cried "Fire, O see the harm!
That we have done," then people came
And rang the fire alarm.

When the firemen came at last
The store it all had burned
And poor old Plast had nothing left;
He just sat still and mourned.

The children Oh, they felt so sad
They all declared that day
They never more would naughty be,
With fire or matches play.

QUESTIONS.

What did the little girl say to her playmates? Did she fear fire? What did the children do? What happened to Clare? What did Tom do? What happened while they were saving Clare? Were the children frightened? What did they say? What did the people do? What happened to poor old Mr. Plast's store? What did he do? Did the children feel badly? What did they say?

LESSON 7.

Careless Handling of Lighted Lamps.

A small child should never attempt to carry a lighted lamp. Even if you are asked to do so by an older person say in a nice, mild manner, "please do not ask me to carry a lamp for it is very dangerous; if I should fall I may be burned to death." If you make a nice respectful reply like this the person who asked you to carry the lamp will be sorry they asked you and will think you are a bright, wise and good child.

When a coal oil lamp falls or explodes, burning oil may be thrown all over the person carrying the lamp or any person sitting near it, and their clothing may start to burn upon their bodies. Small children should not be allowed, much less told, to light a lamp. Neither should they be asked or allowed to blow out a lighted lamp. If you stand over the lamp chimney and blow down into it while the light is turned high you will force the flame down into the lamp where it may catch the oil and cause an explosion. If you ever have to blow out a lamp turn it low first and then blow across the top of the chimney, not down into it.

If you are near when a lighted lamp falls or explodes, throw a rug or heavy coat or piece of carpet upon it; this will put out the flames quicker than water. Hold the rug or quilt down tight on the flames, and it will smother them out. Of course if some older person is near let them do that, and you run and get some water, but a rug or piece of carpet or heavy material is better in case of a kerosene or gasoline fire, for this method smothers out the fire while water sometimes spreads it.

One night a mother and father left their little nine-year-old daughter to take care of her little brother and sister while they went away to spend the evening. The children were seated at the table cutting out and dressing paper dolls; the little brother, three years old, tried to reach across the table to get a picture, and in doing so upset the lamp, and it fell on his arm and threw burning oil all over him. In a moment his clothes were all on fire. His little nine-year-old sister threw him on the floor and wrapped the carpet and some rugs around him and soon the flames were smothered out. When the parents came home and found how the brave, sensible little girl had saved her brother's life and also their home, they were overjoyed and asked her how she knew just what to do. She answered that her teacher at school had told the pupils that if anyone's clothing was on fire not to throw water on them but to roll the person on fire in a rug, carpet, heavy coat, blanket or quilt and smother the flames. You see this little girl was an intelligent child and listened to and remembered what her teacher told her, and thereby saved her home and the life of her little brother.

QUESTIONS.

Should children carry lamps? What should you say if asked to

do so? Should small children light or put out lamps? What might happen if you should stand over a lamp chimney and blow down into it when it is burning high? What should you do before you attempt to blow out a lamp? What should you do if a lamp explodes or falls and sets fire to a person's clothes or to the house? How did a little girl once save the life of her brother? How did she know what to do? Should children always listen to, remember, and obey what their teachers tell them?

LESSON 8.

Dangerous Practice of Children Building Fire in Stoves.

Children under eleven or twelve years of age should never be asked to build fires in stoves, except in extreme cases, where it is absolutely necessary. If such a task is necessary for some few of you, surely you would not think of starting a fire with coal oil or kerosene. You should tell your parents never to use it, and they should not allow anyone in their home to do so; it is a very dangerous practice even for grown people. Paper and light shavings and wood will start a fire quickly enough for anyone. If there is the tiniest red coal in the stove, or even if there is no red coal, but if the stove is hot, there may be an explosion as soon as you pour the coal oil or kerosene in the stove. Many people have been fatally burned by pouring coal oil from a can into a stove when apparently there was no fire in the stove. Every day some person is burned to death by using coal oil to start fires, and yet the dangerous practice is continued.

QUESTIONS.

Should children start fires in stoves? If they have to, should they use kerosene or coal oil? Is it a dangerous thing for even grown people to do? What are you going to tell your parents about it? How can you easily build a fire in a stove? If there are red coals in the stove and you pour coal oil on them, what is likely to happen? Are people ever burned to death by using coal oil to start fires?

LESSON 9.

Fireworks Injurious to Life and Property.

Every Fourth of July many lives are lost and many hundreds of dollars' worth of property is destroyed by fire. Children are

burned to death, their eyes blinded and fingers and hands blown off or they are otherwise crippled for life. Firemen are kept busy all day running to fires that have been started by fireworks. We know of instances where brave firemen have been killed while driving to a fire, by being thrown from their wagons when frightened horses jumped aside on account of explosives thrown at them as they passed. All fireworks are dangerous, if not so in the article itself, then because children have to use fire or matches to light them, or they must contain explosives that a hard knock or blow will "set off." A great many of our advanced cities prohibit by law the use of fireworks.

Even the little toy pistol is dangerous, for the caps contain chlorate of potash, and if a piece of this poisonous paper gets under the flesh in your hand or face and the dust carries some germ to it you probably would get lockjaw, a most terrible and fatal disease. If you should ever be injured in this way do not cover up the wound with a plaster but go to a surgeon and let him open and dress it; pure fresh air helps to kill germs.

Children, do not spend your money for fireworks. If you must see them have your parents take you to some park where a large display is going to be sent off by some experienced person in a place especially adapted for the purpose. Do not use fireworks yourself and tell your parents not to use them.

QUESTIONS.

Are many lives and much property destroyed each Fourth of July? Does the Fourth of July bring extra danger to brave firemen? Are all fireworks dangerous? Do many of our large cities allow fireworks to be used on the Fourth? Why is even the little toy pistol dangerous? What should you do in case of injury? How should you spend the Fourth? What are you going to tell your parents?

LESSON 10.

Review of Common Fire Dangers.

As this will be the last lesson on "Fire Dangers" that you will have this year, we are going to ask you to write a review of all the lessons you have learned during the year on this subject and try and

remember them. If you will do this each one of you can in your own little world become a fire marshal for the summer.

Never handle matches for work or play. Don't have them around you. If you find them lying carelessly about pick them up and give them to a grown person or put them away in the match-box. Do not light lamps or candles, and never attempt to carry a lamp. Never light or play around a bonfire. If you see other children engaged in this dangerous pastime tell them how wrong it is and ask some older person to stop them. Never touch a lighted Christmas tree. Tell your parents to keep a bucket of water near the tree. Try and remember what to do if your clothes should catch fire. Never start a fire if you can avoid it; if you must, never use coal oil. Use paper and light shavings and be very, very careful. Tell your older brothers and sisters and your parents never to use coal oil or kerosene to light a fire. Do not use fire works on the Fourth of July. Tell your parents to take you to some park where they provide exercises, games and amusements and you can have a good time without any dangerous fireworks. Tell your parents not to buy them. Never touch them yourself.

If every child here will remember and obey these instructions they can do a great amount of good in the world, at this time, and when they grow up they will be useful citizens.

Let us see how many hard-working little "Fire Marshals" we will have in this class.



FIFTH AND SIXTH GRADES

Now good children will you try
Through all your future days,
Only to do such wise good deeds
That everyone will speak your praise.

Be careful, of the lighted lamp
For if it should upset or fall,
A dreadful fire from it may start
And damage done beyond recall.

Never play with bonfires
With any child on earth,
For they are bad and dangerous
And sorrow follows near such mirth.

Oh! beware of gasoline,
Never touch it day or night,
For it blazes up so fierce and fiery
When it touches heat or light.

Don't put coal oil in a stove
Even if the fire is out,
It is a dangerous thing to do,
And causes many fires, no doubt.

Always heed your teacher's words
And from good you'll never stray.
Today the lesson we would teach you
Is with fire and matches never play.

LESSON 1.

Origin of the Match.

Our forefathers had no matches; they kept fire from day to day, week to week, and year to year in the open fireplace. They would cover the hot coals at night with ashes, and in the morning the coals, being still alive, would burn up when they were poked and wood or coal placed upon them. Our ancestors lighted their candles from

these fires; they had no lamps. If the grate fire happened to go out they had to go, sometimes miles, to their neighbor's to obtain burning coals with which to start fire again, or else spread flaxen tow on the hearth, pour a little gunpowder over it, then take a piece of flint and strike it with a piece of steel while holding it over the tow. They would continue doing this until sparks would fly from the flint on the powder and set the tow on fire. Imagine all this trouble just to light a fire, a candle, or a lamp. Now, matches are so cheap and plentiful that we throw them carelessly around so that they start fires when we do not need or want them.

We can buy 500 matches for five cents. Approximately 10,000 matches are lighted every second of the day in this country.

The match is an especially prepared piece of inflammable material designed to enable us to obtain fire quickly. It is a splinter of wood dipped into some combustible material which will ignite on being rubbed against either an especially prepared or any solid surface.

In 1827 the Lucifer match, the first friction match, was invented. The combustible mixture was a compound of chlorate of potash and sulphuret of antimony, with powdered gum to render it adhesive when mixed with water and applied to the end of the match, which had previously been dipped in melted brimstone. The matches were lighted by being drawn through a piece of sandpaper. The ignition of sulphur and phosphorus by friction was discovered by Godfrey Hankwitz and Robert Boyle in 1680, but it was 150 years before the discovery was applied to matches.

The first matches in use in this country were pine blocks one or two inches square. The blocks were split part way down so that strips or splinters could be pulled off. The loose ends of the splinters were covered with a mixture containing sulphur.

The composition in which matches are dipped is phosphorus and nitre, or phosphorus, sulphur, and chlorate or potash mixed with melted gum or glue and colored with vermilion, umber, soot, etc. The matches in general use today are the Parlor Match and the Safety Match.

The Parlor match is most easily lighted because the least force or friction will ignite it and make it blaze. For this reason it is particularly dangerous. We hope in the near future to see the Parlor

match supplanted by the Safety match in this country.

Tell your parents to buy and use only Safety matches.

QUESTIONS.

What did our forefathers do before they had matches? Is it any trouble to obtain matches now? What is a match? When was the first friction match made? Who first discovered the ignition of sulphur and phosphorus by friction? What matches are in general use today? Why is the Parlor match very dangerous? What kind of matches are you going to tell your parents to buy?

LESSON 2.

Danger of the Parlor Match.

The Parlor match lights too readily for public safety. Stepping on this match has been the cause of burning women to death, and often property is destroyed by a person stepping accidentally on a match. It is criminal negligence to leave matches lying carelessly around on tables, desks, in drawers and on the floor; they will blaze up if even some ordinary article is thrown upon or rubbed against them. A very destructive fire occurred recently by a match being caught in the drawer of a bureau; the drawer was closed quickly and the match ignited and caused a large fire before it was discovered.

Thousands of fires caused by "carelessness with matches" occur in the United States every year. If you see matches lying carelessly around on tables, chairs, desks, on the floor or on window-sills, pick them up and put them in their proper boxes. A few months ago a fine dwelling was burned by a window being shut down with some force on a Parlor match which was lying on the window-sill. The force of the window shutting down ignited the match, and as it was late at night the man who shut the window walked away and did not know anything about the burning match until his house was on fire and he smelled the smoke. Just think from what a trifling bit of negligence a great loss can occur. Sparks flying from matches after they are struck often set fire to curtains and clothes.

The "strike anywhere" Parlor match is very dangerous in the hands of children. They have no trouble whatever in lighting it. Rats and mice can light them with their teeth.

We have a report of a fire which destroyed property amounting

to \$800 and burned a little boy to death. This little boy found a box of matches in the house, and while his mother was not looking carried them out in the barn. In a short time she saw great flames of fire coming out of the barn; she ran out and called the neighbors, but before anyone could render assistance, or before the fire engines came, the barn was burned to the ground, and the little boy burned to death. No one will ever know just what he did, but he had matches or he could not have set the barn on fire. Of course the flames, as they always do, reached out and caught his clothing and burned him before he could run away.

TELL YOUR PARENTS TO BUY SAFETY MATCHES.

QUESTIONS.

Why is the Parlor match so dangerous? How did a Parlor match cause a destructive fire? Are many fires caused by carelessness with matches in the United States every year? What should you do when you find matches lying carelessly around? What caused a fine home to burn? Why is the Parlor match particularly dangerous in the hands of children? Can rats and mice light them? How? How was a little boy burned to death?

LESSON 3.

Safety of the Safety Match.

To lessen the danger of fire incurred by using matches so easily lighted as the ordinary old fashioned and Parlor matches, Safety matches were put upon the market in 1855. They were invented by J. E. Lundstrom in Sweden. In the Safety match the phosphorus is omitted from the composition applied to the match and is combined with sand to form a rough friction surface on the match box, where the matches must be rubbed in order to be lighted. They will not light in any other way, hence this obviates the danger of children finding matches and lighting them unless they have the box; they will not light when stepped upon nor can rats or mice light them.

Public sentiment has already demanded that we replace the Parlor match with a Safety match. Match manufacturers realize the rising sentiment against the match which annually causes such appalling fatalities and enormous loss of property, and they are willing

to co-operate with officials who are seeking to abolish it. Many states will soon enact laws positively prohibiting the "manufacture, sale, storage or use of white phosphorous, single dipped, strike anywhere Parlor matches. This also means matches that will ignite when stepped upon or matches that throw off burning particles or sparks when struck." It may not always be convenient to use only a match that must be struck on a particular box, but it is advisable to always have a "properly safeguarded type of match," and this American genius will produce.

Louisiana and Wisconsin have already passed laws prohibiting the use or sale of any but the Safety match. Other states will and should follow this commendable example by passing similar laws. These laws should insist that the sticks of safety matches be dipped in a solution that would prevent the stick from burning after the head of the match had burned away. Such laws when enacted and enforced regarding the sale and use of the Safety match should and will reduce the annual fire loss many millions of dollars every year, and save thousands of lives. Matches are made by ingenious and automatic machinery from the time the match is taken up by the machine in the form of a pine block until the matches are discharged on a rotating table, all made and finished as we see them ready for use. They are even packed nicely and evenly in their boxes by automatic machinery. A machine will turn out hundreds of matches in a minute. Think of the wonderful progress in the manufacture of matches since the year 1880. These Safety matches cost very little more than the dangerous Parlor matches, and good citizens should refuse to buy or use any other kind of a match. They are not as dangerous in the hands of children and can not cause so many fires by being thrown carelessly about.

There is a match made particularly for smokers which is a very dangerous article. The head is so treated and prepared that after it is once lighted it will not stop burning until the head is entirely burned. This match has a strong odor, and for this reason, after a man is through lighting his cigar or pipe he throws the match away as quickly as possible. As he can not blow the match out he throws it away while it is still lighted, thinking it will go out before it falls to the ground, but this it does not always do. These matches fall, while still burning, through iron gratings in sidewalks, areaways, cellar windows, and into rubbish in alleys and streets and cause

many fires. The stick of the match remains red even after the blaze is out, and this hot ash of the stick will set fire to any inflammable material it may happen to fall upon. Men who smoke should always be careful and see that the flame is out and the match black before they throw it away. They should always be careful and see that they never throw a cigar or cigarette stub away while it is still burning. Cigar and cigarette stubs cause a vast number of fires. Of course school boys would not be guilty of such a thing as smoking, but they can tell men who do smoke to be careful with matches, cigars, cigarettes, and pipes.

QUESTIONS.

Why and when were Safety matches manufactured? How is the Safety match made? Can children or mice and rats light them? Does everyone realize how dangerous the Parlor match is? What states already prohibit the sale of the Parlor match? What kind of matches should everyone use? What kind of a match is sold particularly for smokers? Are they dangerous? Why? Do cigar and cigarette stubs cause many fires?

LESSON 4.

Mice and Matches.

Numerous fires are caused every year by matches left carelessly around where they can be taken away by rats and mice. So careless are we with matches and so recklessly do we throw them about, that even mice and rats realize it and look upon matches as one of the most easily obtained articles with which to build their nests. The old rats find matches lying around and they take them away into attics, cellars, and between the partitions in houses and barns and use them in building their nests. The rats also chew and bite on the hard ends of matches to file and sharpen their teeth, and our dangerous Parlor match often lights from the friction the rats cause when biting it. When the match lights it sets fire to the rat's nest, then the nest sets fire to the old rubbish near it or to the wooden partitions or floors. As rats always build their nests in an out-of-the-way or hidden place the fire has time to gain great headway before it is discovered.

Rats, mice, and matches do thousands of dollars' worth of damage yearly. If we would only be careful and not leave matches thrown carelessly around on tables, in drawers, on floors and in

rubbish piles, the rats and mice could not get hold of them and light them and the great loss from these fires would cease.

If we would only use the Safety match the rats and mice could not start a fire with it, because the Safety match will not light unless it is struck on the box especially prepared for lighting it. The rats or mice do not know how, or even if they did, could not strike the match against the box in a way to light it, so you see they could never light the Safety match or start fires with it.

Tell your parents to buy only Safety matches and when you go to the store for matches be sure to tell the storekeeper you want Safety matches.

QUESTIONS.

Do mice and matches ever cause fires? Are we careful with matches? Do mice and rats find it hard to obtain them? What do they use them for? How do mice and rats start fires with matches? Where do rats usually build their nests? Why do fires caused by rats and mice gain great headway before being discovered? Do they burn up property of much value? How could we prevent these fires? Why should we use the Safety match? Could the rats or mice light it? Why not?

LESSON 5.

Fate of Children Playing With Matches.

Four or five girls and boys were playing together one day when one of the little boys found some matches lying on the sidewalk. He picked them up and said "Come on and let us make a fire." All the children consented except one little girl who said her mother had told her never to play with matches or fire. She told the other children not to light the matches, but they only laughed at her. They went ahead and made a big fire with paper and hay and weeds right beside the house where the little boy who found the matches lived. They piled everything they could find on the fire to make it burn up high and bright, but they did not notice that the wind was blowing pieces of the lighted paper against the house and into the cellar window. Before the excited children noticed it the house was in flames. Neighbors called the fire department and soon the brave firemen were working trying to save the beautiful home, but the fire had too much

of a start, and the house and barn, belonging to this disobedient boy's parents, were burned to the ground, and he and his mother and father were without a home.

If these children had heeded what the good little girl, who always obeyed her mother, said to them they would not have caused this great loss of property.

We had a report of a fire just a few days ago where a child twelve years old found some matches, and together with several other children started out to use them, instead of taking them home or giving them to some grown person. They secured some old boxes near a grocery store, put papers into them and set them on fire just to see them burn. Of course the boxes lighted up, and soon the fire was roaring. The fragments of paper and sparks from the wooden boxes blew all around, and before the children realized it the sparks had set fire to the frame store building; the wind carried the fire on and on until it was entirely beyond the control of human hands. A whole block of stores were burned to the ground, doing thousands of dollars' worth of damage. So angry were the owners of the stores that they demanded that the children who started the fire and furnished the matches with which to light it be severely punished.

Do not play with matches; they destroy life and property every day.

QUESTIONS.

What did the little boy say when he found the matches? What did the little girl say? What did the disobedient children do? What happened after they made the fire? What happened to the pretty house and barn? What did a little boy do when he found matches? How did the fire burn the buildings? What did the owners of the destroyed property want to do with the children?

LESSON 6.

Dangers of the Open Fireplace or Grate.

Many fires occur each year from the open fireplace or grate. A red hot wood fire in an open fireplace may throw sparks out into the room upon floors and carpets where they may cause a destructive fire. A grate should not be filled too full of coal. Coal expands when

it becomes red hot, and if the grate is too full the red coals will roll out on the floor. Every open fire place should have a wire fender in front of it; this will prevent children from going to close and having their clothing catch fire. If the wire is fine enough it will also stop the sparks and red coals from falling on the floor. Coal sometimes explodes and flies into the room because of the generation of gas when the coal is heated.

A six-year-old boy was seriously burned by falling into an open grate. He was running around the room playing with a younger brother when he stumbled and fell into the open fireplace. He was burned so badly all over his face and arms that he could not see or speak for weeks.

A little girl stood on a chair to reach for something on the mantel; her dress caught fire from the open grate and she was so badly burned that she died the next day. All fire makes an upward draft. This draft will draw to the flame any light substance that comes close to it.

In a beautiful home children were playing around the grate and throwing papers into it to see them blaze. One newspaper was only partly thrown into the grate; it caught fire and the flames spread out on the carpet; the children became frightened and ran away and the house was destroyed.

Matches should not be left on top of a mantel when there is a fire in the grate; the heat may ignite them.

NEVER ATTEMPT TO START A FIRE IN A GRATE OR STOVE WITH KEROSENE OR COAL OIL.

Never stuff papers or rags into an unused grate. Never close a fireplace with wood even when it is not in use. Soot in the chimney may take fire, or sparks from some other source of heat, in the same flue, may fall down the fireplace and set the paper and rags or boards on fire.

Never use any source of heat in false fireplaces or in grates and fireplaces that were built for ornament only and not for use.

QUESTIONS.

Why is the open fireplace dangerous unless properly guarded? What change takes place in coal when it is hot? What should every open fireplace have? What is a wire fender? Does coal ever ex-

plode? What happened to a little boy who was playing around a fireplace? What happened to a little girl? How was a beautiful house destroyed? Should matches ever be placed on top of a mantel? Should coal oil ever be used in starting a fire in grate or stove? Why should paper or rags never be placed in a grate? Should fire ever be started in grates that are built for ornament only?

LESSON 7.

Kerosene, Gasoline, Naptha.

Kerosene or coal oil—petroleum it is called in its crude form—comes from the ground like coal or water; hence it is a mineral product. Oil is found in this country in Texas, Pennsylvania, Ohio, Indiana, Wyoming, Kansas, Oklahoma, and several other states. The oil is obtained by boring or drilling deep holes in the earth. The oil when first taken out of the ground is black and thick. It is then taken to an oil refinery and boiled or refined. The vapor that arises from the first cooking is cooled in pipes under water and this cooled vapor is called gasoline. The second vapor that comes from the petroleum after the gasoline is taken away is not as fine as the first; it is heavier in volume and specific gravity and more oily; this is called coal oil or kerosene. Four quarts of petroleum makes three quarts of kerosene.

After the gasoline and coal oil are refined out of the petroleum what is then left is made into vaseline, lubricating oil, and over 100 other articles which are sold upon the market. You see it is a most profitable product, for none of it goes to waste. It is from oil wells that the wealthy John D. Rockefeller made his great financial start.

In the home we have principally to deal with kerosene or coal oil for lighting and heating purposes. While it is a great and necessary article of household use, like many other useful things we ourselves, by careless habits and practices, make it a menace to life and property.

Probably the most dangerous of all uses to which kerosene is put is that most deplorable habit of using it to start fires in coal or wood stoves and furnaces. This is ALWAYS a dangerous practice. Never do it. Children should not be required or requested to build fires in stoves or furnaces, but if such a duty is necessary for some of you, please heed this caution, "**Never Use Coal Oil or Kerosene to aid you**

in starting a fire”—it is a dangerous practice even for grown persons. Paper, light shavings, and wood will start a fire quickly enough. If you must use something to ignite more quickly and surely than paper and wood, use some prepared kindling or a “fire starter,” which is approved by the National Board of Fire Underwriters and is guaranteed to be harmless. Tell your parents never to use kerosene for starting fires; they should not allow servants or anyone in their home to use it for this purpose.

If you use a kerosene stove be sure and regulate it according to the directions of the manufacturer or dealer. They know how the stove should be governed, and they will show you or furnish you with printed directions which should be carefully adhered to. They do not want their patrons to have an accident with the stove, for that would hurt its sale. Keep the burners clean. If the stove leaks or does not burn properly have it attended to at once by some competent person and do not attempt to use it until the defect is corrected. Above all, never attempt to fill the reservoir of a gasoline or kerosene stove while the burners are lighted.

If you will learn to be careful and correct in your habits now while you are young they will stay with you through life and you will grow up to be careful men and women.

QUESTIONS.

What is kerosene, gasoline, and naphtha? Where do we get it? How is it refined? What part is gasoline and what part kerosene? What else is manufactured from petroleum? Is it a profitable mineral? Who became very wealthy from oil wells? What do we use kerosene for in our homes? What is the most dangerous way in which we use kerosene? How should you start a fire? If you must use something to make the fire ignite more quickly than it will with paper and shavings what should it be? Will a tiny red coal or the stove being hot cause an explosion when coal oil is poured in the stove? Does this dangerous practice cause many fires? What care should be taken in using a coal oil stove? Should a coal oil or gasoline stove ever be filled while lighted?

LESSON 8.

How to Build a Fire in a Coal or Wood Stove.

Never start a fire with coal oil or kerosene. It is always danger-

ous. It is one of the most common and reckless practices we know of.

To light a fire first turn on the draft of your stove or furnace. Put some papers in the stove, then some light shavings or prepared kindling wood, scatter these lightly over the grate, then light a match, touch your paper with it and when this burns up nicely, put in some more and larger pieces of wood until there is fire enough to light your coal. Then put your coal in, not too much at first, until it gets a start. Anthracite or hard coal will require more heat to ignite it than will soft coal or bituminous coal.

Coal oil will start a fire quickly as it gives off six times as much heat as wood in burning and can be lighted with a match, but it can never be used safely.

Every day we read in the newspapers how some one is burned to death and property destroyed by using coal oil to start a fire and yet people will not take heed from the dreadful warnings.

Of course, any child knows gasoline near a fire would mean certain death, so we will not talk of gasoline in connection with starting fires.

When your coal takes fire and begins to burn freely, shut off the main drafts and regulate your fire according to the heat you desire. Never fill a stove too full of coal, especially at night or when you are going to leave the stove unwatched. Coal swells while it is burning, and if the stove becomes too full the coals are likely to fall out of the open door on the floor.

Never put kindling wood in the oven. This practice causes many fires. People frequently forget it and make a big fire in the stove, the wood in the oven ignites and smokes your room and you may have a very damaging blaze.

If a stove smokes and the fire does not burn properly, investigate it. Thick smoke may cause an explosion when it starts to burn. The flame sets fire to gas in the smoke and to the unconsumed carbon which makes smoke black. Smoke explosions can cause destructive fires. If your stove smokes find out why and correct the defect. It is probably choked with soot. Winter fires are usually caused by overheated stoves, furnaces or boilers, pipes or chimneys.

Never let a fire burn so hard and fast that the iron of the stove or the stovepipe becomes red. When your fire burns up brightly and hot regulate the drafts and dampers and govern your fire so that

all the heat will not go out the chimney but will stay in the stove and throw heat around the room.

The following is a true incident told us by the young lady who had the experience in the following words:

"It was a very cold winter night and the fire in the kitchen range was very low. I put in a few pieces of wood upon the hot coals and filled the stove with coal; then put my feet in the oven and sat down to read. Suddenly my mother called to me from the yard outside that the chimney was on fire. I ran outside and sure enough red hot soot and flames of fire were pouring out of the chimney upon the roof. While I was looking up at this I noticed the reflection of fire in the back bedroom upstairs over the kitchen. I ran upstairs and found that the wall paper covering the unused stovepipe hole (there was no metal cap over the hole under the paper, and as it was papered over when we moved in the house we never knew a chimney hole was there) was on fire. We threw water on this and turned off the drafts of the stove, but we could not stop the fire flying out of the chimney until we had thrown handfuls of salt and baking soda and lots of water in the stove. Luckily the shingle roof of the house did not catch fire.

"If my mother had not gone out doors and noticed these sparks our house might have been burned, for if a spark had set fire to the roof it would have been well under way before I would have discovered it as I was sitting comfortably reading by the hot stove."

If this house had burned the cause would have been "gross carelessness" of several different kinds. First, allowing the fire to burn so hard and fast without checking it; second, the unused chimney hole upstairs should have been covered with a metal cap and not wall-paper; third, the chimney was dirty and full of soot, which readily caught fire and flew about in flaming sparks. So much soot should not have been allowed to accumulate in the chimney and would not if it had been regularly cleaned out. Never make a roaring hot fire in a stove.

QUESTIONS.

Should any one ever start a fire with kerosene? How should you start a fire in a stove or furnace? Is it dangerous to use coal oil even when there is no fire in the stove? Is gasoline dangerous near fire? How should you govern your stove after the fire has started? Is it

dangerous to put kindling wood in the oven? Will smoke cause an explosion? Should you ever let the stove become red hot? Relate the experience of a young lady and an overheated stove.

LESSON 9.

Proper Care of Kerosene Lamps—Candles.

There is little danger of kerosene lamps exploding if we are careful and use them properly.

In the first place, keep coal oil or kerosene in metal cans in a safe place away from fire. Never keep a coal oil can near a stove. Keep it outdoors. Fill the lamps by daylight only. Never, under any circumstances, fill a lamp while it is burning. Keep your lamps and burners clean.

The lamp consists of the bowl where the oil is kept, the burner which regulates the lamp and holds the wick, and the chimney.

Never fill the bowl of the lamp to overflowing. **NEVER FILL IT WHILE THE BURNER IS LIGHTED OR WHILE ANY LIGHT IS NEAR IT.** Keep your wick nicely and evenly trimmed. Notice the little flat tube alongside the wick tube? This is a small open passageway for the escape of vapor from the coal oil. If the vapor can not pass through this little tube-like hole it is a dangerous condition and your lamp will not burn satisfactorily. The vapor that passes up through this little tube is consumed in the flame of the lamp. When this hole or tube, or the tube where the wick goes through, becomes dirty or choked there is danger of an explosion. Keep your lamp burners clean. The wick tube and the little air tube must be kept free and clean, also the screen which you see in the lamp burner must be kept clean and the little holes open so that the flames can breathe. If the burner is old and dirty it may become so warm that it will heat the oil and set it on fire.

When a lamp gives out a smoky, offensive odor something is wrong—the burner has become stopped up, the little air tube does not perform its work of ventilation, or the oil in the lamp is old and dirty; lamp burners can be cleaned thoroughly by boiling them in lye water; or any strong washing and cleansing powder may be used instead of the lye. Lamp burners are very cheap, and when they are so old they begin to give constant trouble they should be thrown away and new ones purchased. Lamps should not be filled from

month to month without ever entirely emptying them. Sediment settles in the bowl of the lamp and the oil becomes foul. Good housewives would not think of treating their coffee pots in such an uncleanly manner by putting in fresh coffee each morning without emptying out the old coffee grounds. Their attention should be called to the fact that they should not treat their lamps in this careless manner.

The chimney must fit well on the burner or your lamp will not burn bright. Do not turn a lamp so high that it will smoke. This condition indicates that there is too much fuel or fire for the amount of air in the chimney. When the lamp is not burning keep the wick turned down to the top of the tube so that oil will not run down over the side of the lamp. Never attempt to blow out a lamp until you have turned the wick down about half way. Then do not stand directly over the lamp chimney and blow down into it. Blow across the top of the chimney. If you attempt to blow out the light while the wick is turned high you may break the chimney or force the flame down into the bowl of the lamp, where the oil is, and cause an explosion.

Over 5,000 fires occur in dwellings every year from kerosene lamps. This can be avoided by care and cleanliness. Lamp fires destroyed over \$250,000 worth of property in one year in Nebraska.

If it is necessary to leave a lamp burning all night it should not be turned too low; neither should it be left burning too high; either of these extremes are dangerous. Place the lamp where no draft will blow upon it. Never place a lamp on the edge of a table or shelf. "Falling lamps" are the cause of many fires.

Candles, while they do not explode like lamps, cause numerous fires. The open blaze of a candle will set fire to any inflammable material that touches it. Curtains, draperies, and clothing often take fire from the little flame of a candle. A candle pushed off of a table into a waste basket caused the destruction of a beautiful home. Never leave a lighted candle on a table, shelf, or in fact anywhere unless it is firmly placed in a candlestick or holder; the candlestick should be made with a solid, substantial base so there will be no danger of it tipping over. Candles and matches taken into dark clothes closets to enable one to find clothing or other articles cause many fires. The open flame can so easily ignite clothing hanging around it.

A candle should never be left burning unless it has a metal or non-inflammable protection under it.

A lantern should receive the same care and attention as a lamp.

QUESTIONS.

Is there much danger of kerosene lamps exploding if we are careful in using them? How and where should we keep kerosene? When should we fill lamps? Should they be kept clean? How should you care for a lamp? How should you regulate it? Do fires caused from carelessness with lamps do much damage? Do candles cause many fires? How? Is it particularly dangerous to take lighted candles and matches into dark closets to look for clothing, etc.?

LESSON 10.

The Nation's Fire Fighters.

There is hardly a person who does not feel admiration, exultation, and enthusiasm when they see the fire wagons running at full speed to a fire, but seldom do they feel sympathy for the brave men riding at death speed, often to death scenes, and always to desolate ones. Nothing in the world looks and in reality is more desolate than the blackened ruins of property destroyed by fire. Burned ruins portray such a hopeless, irrecoverable, desolate loss, and when the blackened ashes have mixed with them the charred remains of some unfortunate human being can you imagine any scene more deplorable, more desolate?

Have you ever thought, dear children, when admiring the exciting spectacle of the fire cart or engine speeding by (whether drawn by man, animal, or motor power) that perhaps the greatest and strongest looking fireman of all would never return from the fire, or perhaps the smallest, most kindly looking one would never cross the threshold of his home again to greet his loved ones? No, you have never thought of this. Yours has always been a thought and feeling of enthusiasm, of glory, of action, of combat, man fighting his most daring enemy; the most desperate; most bright and brilliant fiend in the whole world. Perhaps this, the last call to duty for some of them, is to a fire caused by carelessness or neglect; yes, probably criminal neglect and carelessness. The firemen ask not whose property it is, whether it is their friend's or their enemy's; they ask not whether it started through accident, carelessness, or design; they only know

that property and human life are in danger and they fight with might and main to save it.

“Not their’s to question why,
Their’s but to do or die.”
Noble Fire Fighters.

Even the proud and faithful animals feel the need of hasty action, and man’s most faithful friend, the horse, exerts his every effort to hurry to the field of battle. Many times faithful horses have dropped dead in their mad effort to reach the scene of fire.

The next time you hear the fire alarm and see men and animals speeding along, think of all this. Stop and reflect that these firemen may be making this mad run to save property endangered by a fire due to carelessness and neglect. These brave men so earnest and anxious to save life and property from destruction; these men who are the greatest body of soldiers in the world, fighting in the cause of humanity and conservation; fighting to preserve and build up, not to tear down and destroy; fighting without flinching; without thought of glory or reward, should receive our consideration. They are endangering their lives from the moment they step into the great trucks and go galloping down the rock and stone pavements or speeding in autos in our great cities, or pulling the chemical and hose cart by hand over rough country roads until they arrive at the fire. When they climb up into crackling buildings that may fall through, or enter under unsafe roofs, their lives are in imminent danger. We should remember that these men have homes, happy wives, and little children who are dependent upon them for their happiness—their very livelihood; and when any person, directly or indirectly, is the cause of starting a fire they are endangering the lives of brave firemen.

No organization bears a closer, nearer, warmer relationship to our cities and villages, to the whole people, than do our fire departments—the splendid paid fire departments in our large cities and the volunteer fire departments in small towns.

Our great George Washington and Benjamin Franklin were volunteer firemen in their respective cities, and took an active part in fighting fires.

The word “volunteer” has such a wealth of meaning. It speaks volumes; it is sweet and pleasing to the ear. “Volunteer fireman” means a ready, willing, voluntary friend and defender. The volunteer

fireman, of his own free will, without compensation of any kind, volunteers to save your life and property from fire.

Honor and respect the generosity and unselfishness of the paid and volunteer firemen; assist them. You have no right to endanger the life of your fellow man. It is criminal. Never be guilty of starting a fire that may endanger property. Heed the lessons taught you on the subject of fire prevention. If any of you children, by your careful habits, are the means of preventing fires, you are brave, valiant heroes. Valor is a fine word, and bravery is akin to nobility.

QUESTIONS.

What consideration do we owe the firemen? Are they working in a noble cause? Does our carelessness cause them needless danger and trouble? Have some of the Nation's greatest men been volunteer firemen?

LESSON 11.

Acetylene Gas.

Great care should be exercised in using acetylene gas for lighting purposes. Many fires have occurred with most appalling loss of life by these plants exploding in the basements of homes, hotels, and public buildings. The plant should be installed in an underground cave, located not nearer than forty feet to any building, and which can be ventilated and lighted by daylight.

Calcium carbide, from which acetylene gas is made, is quicklime and coke ground, mixed, and baked together in an electric arc furnace at a heat of about 6,000 degrees Fahrenheit. After cooling it is crushed into small lumps and packed in metal cans.

The carbide used for feeding these acetylene plants should be kept in a dry place outside of and away from any house or building, and the cans should be kept closed and sealed, so that neither air nor water can get into them. Exposure to the air injures the carbide, and if it becomes wet gas is immediately generated. When mixed with water the lime in it slacks and the coke joins with the hydrogen of the water and makes the acetylene gas for lighting.

If your acetylene gas machine needs repair or gas escapes in any way **NEVER ATTEMPT TO FIX IT BY ARTIFICIAL LIGHT. THIS IS ALWAYS DANGEROUS.** You can easily detect the odor of the escaping gas and this should be a warning to you to keep all artificial lights away. Never take a light near the machine. If you ever notice

the odor of escaping acetylene gas in your house or any other building, open all the windows and doors and then try and find out, without using a light or match, where the leak is and repair it at once.

Directions always come with acetylene and gasoline lamps, and these directions should always be **carefully** followed in lighting and controlling them. Open lights of any kind, i. e. lights that have no globes or any protection over them, are dangerous. If they have no globes they should be protected by wire cages, so that curtains, portieres, or other inflammable articles cannot come in contact with them.

(Note to teachers—As acetylene is burned in few localities we will not dwell longer on the subject here. If it is used in the locality where you live you can impress the danger of this form of lighting upon the children and give them more details in reference to the care to be used with calcium carbide.)

QUESTIONS.

Are acetylene gas plants dangerous? Have they caused much damage? How should they be installed? What is calcium carbide? How should it be kept? What precaution should you use in regulating the plant? Does acetylene gas explode readily?

LESSON 12.

Fourth of July Dangers.

Every year on the anniversary of our INDEPENDENCE as a nation we read in the daily papers how many people have been made DEPENDENT for life by their foolish methods of celebrating the Fourth of July. Dependent because they have lost their eyesight, their limbs, or suffered other permanent physical injuries, or because by their carelessness with fireworks they have destroyed their homes, their business houses, and lost their savings accumulated by years of toil. The firecracker, the skyrocket, the roman candle, the canon, and other "destructive toys" yearly dole out their share of pain and misery. The little toy balloon sent up as an attraction for the eye at night has many times dropped upon the roofs of buildings, in yards on dry grass, on barns, hay stacks, and other places where it has caused the destruction of property worth hundreds of thousands of dollars.

So productive of fires are these fireworks that many of the most progressive cities throughout the country have passed ordinances pro-

hibiting the sale or use of any kind of fireworks or explosives on the Fourth of July.

Each year new kinds of fireworks are manufactured and there seems to be an increase in volume of fire and explosive effect. It seems that the larger and brighter the fire or the louder the noise the more attractive is the article. However, since many officials and citizens have interested themselves in the matter of celebrating the Fourth in a safe and sane way the loss of life and property has naturally decreased. The following is a table giving the statistics of fatalities for the past fifteen years. This decrease in loss of life and property is indisputably due to the agitation by fire marshals and city officials against the dangerous method of celebration heretofore practiced on Independence day. The fact that school children are now being taught the great danger of using fireworks and because they are helping to abolish the old, dangerous way of observing the Fourth, the enormous loss on this fateful day has been gradually decreasing as per this table:

Statistics of Independence Day in America.

(Compiled by Journal of the American Medical Association.)

This table of casualties by years shows the steady progress of the safe and sane idea and its beneficent result:

Year	Dead	Wounded	Total
1903	466	3,983	4,449
1904	183	3,986	4,169
1905	182	4,994	5,176
1906	158	5,308	5,466
1907	164	4,249	4,413
1908	163	5,460	5,623
1909	215	5,092	5,307
1910	131	2,792	2,923
1911	57	1,546	1,603
1912	20	659	679
1913	32	1,131	1,163
1914	40	1,486	1,526
1915	30	1,135	1,165
1916	30	820	850
1917	11	208	219
	<hr/> 1,882	<hr/> 42,849	<hr/> 44,731

In the fifteen years a total of **44,731** people—the equivalent of **nearly forty-four regiments**—were killed or injured in the celebrations of the Fourth of July.

We trust that all children in this state will cheerfully and willingly help in this movement to abolish the sale of deadly explosives and fireworks. Refuse to buy the dangerous articles; tell your parents you do not want them. Ask them not to use fireworks, and do all you can to discourage their use by others.

Each one of you can do a great deal of good for your city or town each Fourth of July if you will act as little “fire marshals” and try and see to it that none of your playmates use fireworks. You can also tell grown people how dangerous they are, and tell them they ought to help you abolish their use; they are a menace to the public welfare and no one has a right to endanger his neighbor’s life or property.

The fire departments of our cities and towns are so overtaxed by the numerous calls they have on the Fourth that it is often impossible to respond when help is asked by neighboring towns. The lives of brave firemen, always jeopardized in going to and in service at fires, are especially endangered on this day by explosives thrown along the streets as they pass, while the hard and frequent trips are a great injury to the faithful horses on hot days, this together with the wear and tear of the fire apparatus makes it altogether a most deplorable situation and adds to the burden of the taxpayer.

Let each one of you solemnly declare that you will not use fireworks on this coming Fourth, that you will discourage their use by others as much as it lies in your power, and that you will use every precaution to make this Fourth the safest and most sensible one that has ever been celebrated in your town.

Enjoy yourselves, have games and lunches at your homes or at some park; organize parades, play ball and other games; enjoy any music that may be within your hearing, and on the 5th of July you will behold no sorrowful scenes of blackened ruins due to the foolish practice of using fireworks on the Fourth.

We feel sure that no child reviewing this lesson will use fireworks again; but we want to give you one more caution, and that is if you should be around where fireworks are used, never pick up any kind of an explosive after it is once lighted, even if it does not go off, and even if apparently there is no light or fire in it. Often the

fire is only smouldering, and many accidents happen by a sudden explosion or burst of fire from an explosive article that is supposedly "dead."

Please tell your parents all about this lesson when you go home.

QUESTIONS.

What happens every year in some town on the Fourth of July? Are all fireworks dangerous? What laws have some cities passed? Have these laws been the means of decreasing the fatalities of the Fourth? Do school children help? What can each child in this class do this year? Does the Fourth of July work a hardship on the fire departments? What are you going to do this year? How can you enjoy yourselves in a nice safe way? Should you ever touch fireworks after they have once been lighted? What are you going to tell your parents?

SEVENTH AND EIGHTH GRADES

Fire is much like a roaring beast,
Once started has its way,
And grimly it demands a feast
And cares not who's its prey.

It burns alike by nights or days
With a fierce vicious blast,
And everything within its blaze
Is swallowed quick and fast.

In alleys and the rubbish heap,
In attics, yards, and greasy rags,
In waste and dirt it loves to stay
Waiting to "LIGHT" when we're away.

Always use caution and good care
With matches, fire, and oil,
Of gasoline and lamps beware
And you their tricks will foil.

LESSON 1.

What Our Carelessness with Matches Costs Us.

Five matches per capita are consumed daily in this country; 90,000,000 people in America use as many matches as the 900,000,000 in the rest of the world. We are looked upon by our brothers across the water as a most extravagant and wasteful nation, and judging from our prolific use of matches it must, in part, be true. The European is careful with his matches; just because they are cheap he does not waste them or throw them around carelessly. He has to buy them, no matter how small the cost, and the thrifty foreigner saves and takes care of his pennies and dimes as well as of his dollars. This extravagance with matches not only accounts for the enormous annual fire waste of this country, but plays a part in the high cost of living. One evil always produces another and a greater one. The prolific and extravagant use of matches and the money we waste due to our needless use of them is serious enough, but when we figure up what their careless use costs the nation every year in fire losses, our extravagance becomes downright wickedness.

A match machine makes over 5,000,000 matches per day. It is estimated that 2,000,000 boxes of matches are used every day in the United States, and that nearly 10,000 matches are lighted every second. Statistics show that 500 fires were caused by the careless use of matches during one year in one state with a property loss of \$200,000; 155 of these match fires were caused by children playing with matches, many of them resulting in fatal and serious injuries. Records show 450 fires from matches in one year in another state with a loss of half a million dollars. In Chicago in 1910 about 1,100 fires were caused by matches carelessly used. How can we expect to control ourselves when we can not or will not control such a little thing as the match? Hundreds, yes, thousands, of people are burned to death each year in the United States by matches, and over 75 lives were lost in one state in one year from this cause.

In New York City during the year 1913, 588 fires were caused by "children playing with matches." The property loss from these fires was over \$320,000. More than \$1,500,000 worth of property was destroyed through the careless use of matches in that city.

Statistics say 15,000 people are injured and 5,000 are killed annually as a result of fire.

This article was clipped from a recent local newspaper:

"A fire last evening destroyed the home of Mr. , a ranchman living about one mile out of town, also took the lives of his three little children, the oldest aged five. The bodies were found in an unrecognizable condition. As is frequently the case in this part of the country, the well is situated nearly a mile from the house, and before Mrs. returned with water for the evening meal the house was in ruins with the fearful fatal result.

"It is presumed that the fire started as a result of the children playing with matches. The parents are distracted, the three being their only children."

Use only Safety matches in your home. See that the fire of every match is entirely extinguished before you throw it away. Denmark, Sweden, and other foreign countries prohibit the use of the Parlor match, hence their fire losses are about \$2 per capita less than ours. We should be as progressive as they.

Every moment of the day matches are being thrown into cuspidors or waste baskets, upon sidewalks and floors, some of them causing fires.

We wish each one of you would look up the statistics of your state and find out how many fires occur there each year through the careless use of matches. You can get the annual report of your state fire marshal by addressing him at the capital city of your state. If your state has no fire marshal, write to a neighboring one and receive theirs. You will be surprised at the tremendous loss you will find in the records, and we are sure you will decide that from this day you will take every precaution in regard to fires from matches and other careless causes.

QUESTIONS.

How many matches per capita are used daily in the United States? Are we an extravagant nation in this respect? Is the European wasteful, too? How many matches will a match machine make a day? About how many matches do we use every second of the day? If we were more careful and could control the match, would many lives and much property be saved? What record do statistics give of people killed and injured each year by fire? What disaster occurred from children playing with matches? What countries prohibit the

use of the Parlor match? Where can you obtain statistics relating to fires in your state? In how many ways can you aid in saving life and property through the careful use of matches?

LESSON 2.

Prometheus Gave Fire to Mankind.

Greek mythology teaches us that Hephaestus or Vulcan, the son of Zeus (Jupiter) and Hera (Juno), was originally the god of fire. Even unto him was attributed the gift of furnishing warmth to the earth. He was thought to be the "smoky smithy" artist god who worked in the heart of burning mountains. Even then the fire god was dangerous and people to a certain extent were fearful of him, for it was he who caused burning volcanoes to bubble forth from the earth and cause great terror and destruction; the firebrand of Hephaestus was feared by all. On the other hand, the fire god was very good and of great comfort and assistance to the gods and mortals. He warmed the earth, which was beneficial to man and to vegetation. By heating metals red hot with his fire, Hephaestus molded for the other gods beautiful images of gold and brass and massive thrones.

The fire of Hephaestus had no connection with the sun or lightning of heaven.

Hephaestus or Vulcan guarded well the fire of which he was god and never allowed mere man to use it. To no one but to Prometheus, the son of Themis, the second occupant of the Pythian Oracle, did he impart the knowledge of fire. "Zeus (Jupiter) foreseeing the arrogance that would arise from so great a blessing, had from the first refused to transmit any portion of his sacred fire to men." Their deplorable condition, however, owing to the want of it, found a champion in the person of Prometheus, and one day his sympathy led him to steal the fire of Hephaestus and bestow it upon mankind. For this sacrilege of bestowing upon mortal man a gift of the gods, Zeus (Jupiter) commanded Hephaestus to nail Prometheus to a rock where he was daily tortured by a vulture.

From this lesson of mythology we learn how sacred and dangerous was the use of fire in olden times. Prometheus in the agony of his punishment for stealing fire, "the bright glory that all arts spring from," cried out:

“For I, poor I, through giving great gifts to mortal men,
Am prisoner made in these fast fetters; yea in fennel stalk
I snatched the hidden spring of stolen fire,
Which is to men a teacher of all arts,
Their chief resource. And now this penalty
Of that offense I pay, fast riveted
In chains beneath the open firmament.”

And then again bemoaning his state, he says:

“Behold me bound, a god to evil doomed,
The foe of Zeus, and held
In hatred by all gods
Who tread the court of Zeus:
And this for my great love,
Too great, for mortal men.”

When questioned as to what evil he did to be thus punished, he said:

“And more than that, I gave them fire, yes, I—
Yea, and full many an art they’ll learn from it.”

Probably Jupiter did know—could foresee all the calamities as well as benefits that would come to men when they had full power of fire, and he punished Prometheus so terribly to expiate, in part, to the Supreme Deity for these misfortunes. However, mankind will always look upon Prometheus as their friend and benefactor, for we know that he bestowed the knowledge of this art upon man through sympathy and fondness for him, never thinking that man would abuse the blessing by using it to his detriment rather than his advantage. So beneficial did Prometheus think this knowledge would be to mankind that even after he was bound to the rock and tortured he would not express sorrow for having imparted this gift to men, but insisted that he was glad for having helped them, maintaining his punishment was unjust.

“In Rome as early as the time of Romulus the people set aside one day each year, August 23, as a festival day called Vulcanalia, where sacrifices were offered for the purpose of averting all the mischances and misfortunes that arise from the use of fire and lights.”

Perhaps no element, no other natural or created being, was regarded as of greater importance or more mysterious in its nature than fire. “The fire of the hearth was the center of domestic life.

Its beam dispelled the dread of darkness and its warmth removed the chill of winter." We know that savage or uncivilized mortals, when they first behold fire, look upon it with wonder and awe, or crouch or flee in fear. Wild animals of the plains or forests are frightened, or overwhelmed and subjugated upon beholding the flames or light of artificial fire.

We of an enlightened and civilized race should in our knowledge of fire always be its master. have absolute control over it, and be able to command it to do our bidding. We should, like the gods of old, be able to use it to our advantage and never allow it to get beyond our control and cause us misfortune.

QUESTIONS.

What does Greek mythology teach us? Was the fire god dangerous? Was he of any benefit? Did the fire of Hephaestus have any connection with the sun or the lightning of the heavens? Did Hephaestus guard well the fire over which he was given control? To whom else did he impart the knowledge of fire? Who was Prometheus? Why would not Zeus (Jupiter) allow mankind to have control over fire? What did Prometheus do to help mortal man? Was he punished for giving fire to men? How was he punished? What do we learn from this punishment of Prometheus? What does Prometheus say? What was the probable reason of Zeus inflicting such a terrible punishment on Prometheus? Did Prometheus think that fire would be disadvantageous to mankind? Did the people of Rome observe a "Fire Day"? Was fire regarded as very important by savages or animals? What should we, an enlightened and civilized people, be able to do with fire?

LESSON 3.

How to Put Up and Care for Stoves, Stovepipes and Chimneys.

We destroy property of value untold

By defective flues and chimney holes.

While stoves with no protection underneath

Set fire to the floor by excessive neat.

In putting up a stove the first thing to do is to put a tin, metal, or asbestos plate or protection under it. If possible the stove should be at least two and one-half feet from the wall or any wood partition on all sides; in case the stove must be placed closer than this to the wall be sure there is a tin, metal, or asbestos protection against the

wall to prevent it from becoming hot or overheated when there is fire in the stove. There should be a slight space of about a half inch between the wall or wood and the metal sheet, when it is necessary to use one, so that the air can circulate between the wall and the metal. If the metal is placed tight up against the wall, and if it became very hot, it might heat or char the wall or wood, but if there is a space for the air to circulate between the metal and wall it will not heat the wall. All stoves should rest on legs a few inches from the floor or zinc, but if a kitchen range has no legs, then, of course, the metal or zinc must serve as a protector; whether the stove has legs or not, it should have a metal protection under it to protect the floor. This metal or zinc should be large enough to extend out at least two feet all around the stove, so that if by accident hot coals should fall out of the stove door they would fall on the zinc and not on the floor. It is a very good idea to put a sheet of asbestos under the zinc next to the floor.

Many fires are caused by stoves placed too near walls, wood partitions, and beds.

All chimneys and stovepipes should be cleaned out at least once a year. This means the chimney hole where the pipe goes into, as well as the brick chimney on top of the house. This can be done easily by getting a long scraper, but it will be better if you can get a man experienced in the work to do it. If there are any bricks or mortar off the top of the chimney it should be repaired at once, not only for safety from fire but because it will make your stove burn better.

The stovepipes should be scraped so that if there are any rusty spots or holes they will be discovered and new pipes used. Never start a fire in a stove when there is even a tiny hole in the stovepipe. If the stovepipe is clean and free from soot it throws out a great deal of heat and helps the stove to warm the room. A stovepipe should not run through a wood partition or ceiling unless there is a metal collar or protection around the wood. Stovepipes running across a room for any distance should be at least two feet from the ceiling. If it is closer to the ceiling than this there should be a protection fastened to the ceiling of metal or asbestos.

If a building is heated by furnace the pipes should be at least a foot and one-half from a wood floor or ceiling, and all furnace pipes should be wrapped in asbestos paper or some other non-inflammable

material. All floors and ceilings should be protected with a tin or metal protection where the hot air pipes run through. The hole in floor or ceiling which the pipes run through should be at least one-half inch larger than the pipe. A hot pipe, even a steam pipe, will char wood. This charred wood or charcoal absorbs gas and will ignite and take fire most readily.

See that the stovepipe fits tightly and snugly into the stove, and that each joint and elbow of the pipe fits tightly and firmly together. Have the pipe that goes into the chimney hole in the wall long enough so that there will be no danger of its slipping out, but do not have it run into the chimney hole in the wall far enough to obstruct the draft. If possible have the stovepipe go by the shortest reasonable route to the chimney, but do not have it go straight from the stove into the chimney; it should have a good elbow so that sparks can not go straight out through the pipe and chimney. Never pass the pipe through wood partitions, floors, roofs, or walls; this is never advisable, but when really necessary, have a ventilated, metal thimble placed around the hole in partition or wall concentrically, and have this metal protection at least one inch larger in diameter than the stovepipe.

If the pipe horizontally is very long the elbow should be wired around the pipe and to the wall and the wires fastened to the ceiling so there will be no possibility of the stovepipe falling down. Reports come to the different fire marshals' offices in the United States every day giving losses amounting to thousands of dollars and saying the cause of fire was "stovepipe falling down." If there is a hot fire in the stove and the stovepipe falls down when no one is at home to see it there will surely be a destructive fire. A stovepipe will not fall down if it is put up safely and firmly as above directed.

Soot accumulating in the pipe obstructs the draft and retards the heat from coming through the pipe into the room.

Burning sparks from the soot in stovepipes and chimneys cause many fires. Around the pipe where the pipe enters the chimney hole there should be a close, tight-fitting metal ring, so that no sparks can fall out.

A person who does not know how to regulate the dampers and drafts of a stove should not be allowed to start a fire or take care of the stove. It is impossible to give instructions as to the regulating of dampers in these lessons as all stoves are not alike.

When you take a stove down never fill the chimney hole with old rags or paper. This is dangerous, for when you set up the stove again you may forget about having filled up the hole and not take this trash out, and it may catch fire and do great damage, at least it will give you trouble with your stove. Always cover the chimney hole when not in use with a metal cap or thimble. This will cost only a trifle. Never allow wall paper to be put over the chimney hole so that it will cover the hole. This is very dangerous. If you should have the room papered and the paperhangers paper the hole over, break it immediately and put a metal cap over the opening, or put the metal cap over the hole before you paper the room.

QUESTIONS.

What is the first thing to do when putting up a stove? How far should the stove be from walls or partitions? If the stove must be placed very close to wall or wood, how should the wall or wood be protected? Why should this precaution be taken? What directions should be followed in regard to stovepipes? Should a person who does not know how to regulate a stove or furnace be allowed to take care of one? Why? How often should the chimney be cleaned? Why? Why should the chimney be kept in good repair? How should the chimney or stovepipe hole be treated when not in use?

LESSON 3 (continued).

How to Put Up and Care for Stoves, Stovepipes, and Chimneys

Never allow your stove to become overheated. During the winter months one-half the fires which occur are caused by overheated stoves, furnaces, etc. Never go away from home leaving a big fire in the stove, and do not fill it with coal before going to bed and then leave the draft on. If you wish to keep a fire all night let the fire burn down moderately and then cover the coals with ashes; this should keep the coals red until morning.

Kindling wood dipped in a preparation of rosin will start a fire quickly. **Never use kerosene or coal oil.**

Remember, sparks flying out of chimneys often set shingle roofs on fire and burn many homes, "Sparks from chimneys," cause fires somewhere in the United States every day.

Never open the cook stove or heating stove doors and go away from home while there is a fire in the stove; hot coals may fall out

on the floor. Of course you should have the metal protection on the floor extending out at least two feet, but the coals may even roll out farther than this and reach the floor or carpet. You have often heard coals in the fire pop and explode. This is the natural gas in the coal exploding on account of the heat, and when coal does this, sparks from it may fly out into the room, and burning sparks often start great fires.

A stove should never be filled so full that there will be any danger of the coals falling out on the floor. Coal expands when heated, and allowances should be made for this when filling the stove.

Never leave clothes hanging within less than four feet of the stove on chairs, clothes racks, etc. Never hang clothes on the oven doors at night. Never hang clothes that have been cleaned with gasoline near a stove to dry. Never hang them in a closed room to dry. The vapor from gasoline will cause an explosion if a match is struck in the room where it is.

In rendering lard or having grease on the top of the stove be very careful that it does not boil over. The minute grease touches the hot iron of the stove it blazes up and burns and the grease in the kettle will take fire. This blaze often sets women's clothing on fire with fatal results.

Never use a cracked or broken stove. Have it repaired at once; the expense of buying a new one will be nothing in comparison to the loss of your life or home. If a stove is sound and whole, is put up properly, with a protection underneath, set far enough away from walls or wood, the stovepipe safe and sound, and chimneys clean, there will be little danger of your stove setting your house on fire.

QUESTIONS FOR LESSON 3 (continued).

Do many fires occur from "overheated stoves"? Do "sparks from chimneys" cause many fires? Is it dangerous to open stove doors and leave the premises while there is fire in the stove? Why does coal sometimes explode? Why should we be careful and never fill a stove too full of coal? Is it dangerous to hang clothes too near stoves? Why? Is it dangerous to hang clothes that have just been cleaned with gasoline near a fire to dry? Why? Should you always watch boiling grease or lard? Is it dangerous to use a broken or cracked stove? Why?

LESSON 4.

How One Should Care for the Heating and Lighting of Churches, Schools, and Stores or Business Buildings.

Again we must begin this lesson by saying, **Never use coal oil to start a fire.** Use papers, light shavings, or fine splinters of wood, and scatter them lightly over the grate of furnace or stove, place larger pieces of wood on top of this, strike your match, and light your fire. When it burns up nicely put in your coal; you can keep the drafts of the stove turned on until the fire gets a good start, then turn off the drafts, and soon the fire from the burning coal or wood inside the stove will heat the room. If you burn only wood in the stove you can put in as large pieces as will easily go into it. **NEVER LET A STOVE OR FURNACE BECOME RED HOT.** Do not let the drafts remain turned on until the flames roar up the chimney. This would send sparks of wood or coal on the roof which might take fire, or if the chimney became overheated it might set fire to the building.

Chimney fires do enormous damage every year. If your chimney takes fire, first turn off all the drafts on stove or furnace, then go upon the roof if you can, and throw, salt, sand, or soda down into the chimney.

Every home, church, and school should possess a long ladder; especially is this essential in the country or small town. It is almost impossible to fight a fire without it, and delay in having to borrow one from a neighbor results in increased loss. Oil and gasoline fires should be smothered. Water spreads them.

Before you lock up the building and leave to go home, see that the drafts are all turned off, and the stove doors shut so that no sparks or ashes can fall out. If you want to keep a low fire all night, do not build a roaring fire and go away and leave it, but let the fire burn down and then put ashes over the hot coals, turn off the drafts, and see that no smoke or gas is escaping from the stove or furnace.

The ashes should always be cleaned away from the under grate before you attempt to build a fire in a stove or furnace. A stove choked up with ashes can not burn properly, and ashes are more likely to roll out on the floor when there is a quantity in the ash pan than if it is empty and there is plenty of room for them in their

proper place. Never throw ashes in wood receptacles or against wood fences.

Great precaution should be taken in churches, stores, and schools regarding any likelihood of fire, for if a fire should start in a building that is locked up and no one inside to discover the fire until it blazes up so big and bright that neighbors or passersby must turn in the alarm, the fire is almost sure to prove a total loss to building and contents; of course, if some one remains in the building there is a chance that they may be awakened in time to save their life and possibly the property. Nearly all fires occurring in country churches or schools at night are total losses. If the fire occurs when the building is occupied by a number of persons some one is liable to be injured or killed.

If your church or school is lighted by kerosene lamps the same rules for filling and caring for them should be adhered to as given in a former lesson about "Caring for Kerosene Lamps." If the building is lighted by acetylene or gasoline the plants furnishing these lights should always be placed outdoors, underground, at least 20 feet from the building, better still, at a distance of 40 feet.

Acetylene plants should never be installed in the basement of a home or building of any kind.

QUESTIONS.

If you have to start fires in stoves or furnaces in schools, churches, etc., how should you proceed? What care should you use in regard to ashes? Why are country school and church fires particularly dangerous? How should artificial lighting plants be installed?

LESSON 4 (continued).

How One Should Care for the Heating and Lighting of Churches, Schools, and Stores or Business Buildings.

Swinging gas brackets are always dangerous unless protected by a wire globe or cage. Improper installing of electric wiring causes many fires, and this should be carefully looked after by persons in charge of schools, churches, or buildings.

All church steeples and spires should be equipped with good approved lightning rods; country schools should also be provided with lightning rods.

Observe and see whether the doors of your church and school open outward. Nearly every state has a law making it a criminal

offence if doors of public buildings do not open outward. If you find, when going out of your church, school, or any public building, that you have to pull the door in toward you to open it, instead of pushing it out from you, you should immediately tell your parents, teachers, or guardians to make complaint to the proper authorities and have this grievous fault remedied.

The disastrous fire in the Collingwood school, near Cleveland, Ohio, in which 167 children lost their lives, was due to carelessness and panic. It is surmised that the janitor had cleaned the floors of the school and wiped them up with oily rags, and that when he was through he carelessly threw them in the basement near the furnace where the fire started. Before the fire was discovered it had gained great headway and was burning rapidly. Every circumstance pointed to the fact that the fire started from the rags which the janitor so carelessly threw away. When the alarm was given the children became panic-stricken and cried and ran every way and would not listen to their teachers. If these children had been well disciplined and could have been called to order and marched out in a fire drill probably no lives would have been lost.

Pay strict attention to your fire drill; always obey your teachers; they are interested in your welfare. No matter what happens, do just as they direct you. Another reason why so many lives were lost in this fire was that the doors of this school opened **inward** instead of **outward**, and when the children rushed in a disorderly crowd they packed themselves against the doors, and, as the doors were shut, the unfortunate children were penned in.

We trust you will impress this lesson on "how to avoid fires in schools, churches, and buildings," upon your minds, and use the care we advise regarding the heating and lighting of same. While we should begin our fire prevention work in our homes, we should not stop there, but carry it wherever we can.

Look in the basement, attic, and storerooms of your church and schools and if you find old rubbish stored there, tell the person in charge to have it taken away. There may be paints, oily or greasy rags, among the rubbish which may form spontaneous combustion or upon which a lighted match may be thrown and a fire started.

QUESTIONS.

Are swinging gas brackets dangerous? Does electric wiring need

careful attention? Should lightning rods be used on buildings, especially in the country? How should all doors of public buildings open? Give an account of the Collingwood school fire and tell the reason it was so disastrous? Should our fire prevention work be taken up in other places besides our homes? Will paints, oily or greasy rags cause fires?

LESSON 5.

Ashes.

We lose every year an irrecoverable loss
Because hot ashes against buildings we toss.

Several hundred fires start every year from hot ashes dumped and thrown against wooden buildings, fence boards, or where they can start fires. Some people are so ignorant or careless as to use a wooden receptacle for ashes or they throw them on floors or against buildings. Never allow this to be done around your home. Have a tin or metal ash box to put ashes in, or if you throw them in a pile in a yard or alley see that they are so far away from any fence or wooden structure that the ashes can not come in contact with it. When we think the ashes are not red or hot enough to set fire they scorch or char, and if a fence or wooden building chars brown it is very susceptible to fire.

Do not allow ashes to accumulate in the ash pans of stoves or furnaces until the pan is completely full or overflows. This not only obstructs the draft of your stove or furnace, but there is great danger of the ashes falling out on the floor or carpet and causing a fire. Ashes should be cleaned from a stove or furnace every morning.

Ashes often look dead and cold when they are not, and half burned coal will often burst into flames after it is dumped in the ash pile.
Have a metal receptacle for ashes.

Never throw ashes within ten feet of a wooden building or fence or pile of boards or lumber.

Do not keep ashes in the cellar until you have a quantity sufficiently large to have them carried away. This is dangerous. Even if the cellar floor is clay or cement, spontaneous combustion may set the ash pile on fire some night when the family are peacefully sleeping or when they are away from home.

Never allow your stove to be filled with coal to overflowing. Do not go to bed or away from home leaving the stove door open when

there is a fire in it. In fact, never leave your house alone when there is a **hot** fire in the stove. Many unknown fires are caused by owners making a **red hot fire** and then leaving the house. The stove becomes **red** and sets fire to woodwork, and no one being around to put it out, it has full sway.

Never allow the stove to become "red" with heat. Empty your ash pan every day. Never throw ashes near wood. Never put ashes in a closet or under a stairway. Moisture will cause spontaneous combustion in ash piles. Even piles of cinders ignite from spontaneous combustion. Sometimes spontaneous combustion forms in coal piles. This is caused by the coal drinking in oxygen from the air. Do not have the coal pile too close to the furnace; the heat may cause the gas in the coal to explode; it is better to have it at least eight or ten feet away. Never have the kindling wood or coal box within three feet of a stove. It is dangerous to throw matches into the wood or coal box. Coal thrown in wooden bins around wooden posts may ignite from spontaneous combustion or explode and set them on fire.

Cautions Regarding Dumbwaiters.

The dumbwaiter doors in the basement should always be kept closed. In case of a fire originating in the basement or cellar if the doors were open the flames would shoot up through the shaft or stairway and quickly spread the fire through the whole building. The dumbwaiter doors should never be tied back. In buildings where janitors are employed they should be instructed to see that the dumbwaiter doors are kept closed.

Never place ashes or greasy or oily rags in the dumbwaiter. The doors should be lined with metal on both sides.

Never empty ashes in wooden boxes or barrels. Keep metal receptacles for this purpose.

QUESTIONS.

Do ashes cause many fires? Why do they? Where should we put ashes when we take them out of the stove? Should we allow ashes to remain for days in stoves or furnaces? Why is the ash pan dangerous if it overflows? How often should the ash pan be emptied? Should ashes be stored in cellar or basement? Why not? Where should we never throw ashes? Why is it dangerous to overheat a stove? How is spontaneous combustion formed in coal piles? Is it dangerous to keep coal or wood too near a stove or furnace? Why? Why should

the doors of dumbwaiters always be kept closed? What should never be placed in the dumbwaiter? How should the doors be lined?

LESSON 6.

Spontaneous Combustion.

The Americana gives the following definition of combustion:

"In consequence of the combustion of the carbon and hydrogen in fuel with the oxygen of the air being the universal method of getting heat and light, and as, when the action takes place the fuel is said to burn or undergo combustion, the latter term has been extended to those cases in which other bodies than carbon—for example, phosphorus, sulphur, metals, etc.—burn in the air, or in other substances than air."

Of Spontaneous Combustion It Says:

"Spontaneous combustion is the ignition of bodies by the internal development of heat without the application of external flame. It not infrequently takes place among heaps of rags, cotton, and other substances strongly lubricated with oil, when if the oil is freshly made, it is very ready to combine with the oxygen of the atmosphere and give out carbon and hydrogen. The heat thus developed, diffusing itself through a mass of highly inflammable substance, will in certain circumstances be sufficient to set them on fire."

Fires caused by spontaneous combustion usually get a good start and are hard to control because they form in oily rags, shavings covered with paint, in old rubbish heaps, in coal bins, in hay mounds, barn lofts where alfalfa, hay, or grain have been stored when too green or damp, and generally in out-of-the-way places, as cellars and attics of homes, the store and waste rooms of mercantile houses and factories, and the fire is not detected until it has a good start, and consequently is hard to control. Many fires in barns classified as "unknown" have been caused by **heated** hay, alfalfa, or grain.

A painter related an experience he had which almost cost him his life. He had been working on a building and had used old cotton rags to wipe off his hands occasionally. The rags became thick with paint and turpentine from frequent use, and he pressed them together and put them in his hip pocket. He was high up on a ladder painting when his clothing took fire, spontaneous combustion forming in these rags. He had to jump down and call upon his fellow workmen to

help him. They smothered out the blaze before he was seriously burned. We could cite many such instances.

Never allow old rubbish, waste papers, excelsior, paints, oils, greasy rags, etc., to accumulate in kitchens, attics, closets, cellars, barns, sheds, yards, or alleyways. Heat from the hot rays of the sun, from a furnace, from a chimney or stove will cause it to burst into flames; if oily rags or rags saturated with paint are wrapped tightly together or piled up on each other, spontaneous combustion may form and cause them to take fire even if there is no heat or fire around. This may happen in a damp cellar. As old rubbish, rags, and waste, if they are not taken outdoors, are thrown in an out-of-the-way place such as an attic, cellar, or closet, so their unsightliness will not be observed by passersby, if they do take fire the blaze is likely to have a good start before being detected. Old rubbish and oily rags that can not be burned or taken away at once should be placed in a metal can, never in a wooden box or barrel. Metal cans for this purpose should be kept out of doors, if possible.

Do not permit greasy rags, paints, oils, gasoline, or coal oil cans or any combustible material to remain in school or church basements or closets or under the stairways. Many school and church fires are caused from old waste and rubbish and excelsior left lying around the premises. If you find a condition of this kind in your church or school, speak to your teacher or the clergyman in charge or tell your parents to do so. A very disastrous fire occurred in one of our large churches recently by a careless janitor leaving oily rags and paint in the basement. Spontaneous combustion set them on fire and the church was completely destroyed.

Many compounds, as floor oils and dust preventives, contain material which will cause spontaneous combustion. A number of fires have been started by spontaneous combustion in rags used for applying these oils or varnishes to floors, woodwork, and furniture. When you are through using rags saturated in preparations of this kind you should see that they are burned or kept in a fireproof receptacle. Never throw oily rags in the rubbish pile; they are almost sure to cause a blaze. They are fire hazards. Every store and business building should have metal cans provided in which to throw this kind of waste, and so should every home. A good rule to make in every household is that all greasy or oily rags be burned immediately after one is through using them.

There are a great many kinds of "dustless dusters" for household, school, church, and office use upon the market today. These dusters are treated with some oily or greasy substance to prevent dust from rising. They are almost as commonly used in homes today as was the plain cloth duster some years ago. Many of these new "dustless dusters" contain highly combustible material. A beautiful home recently caught fire from one of these dusters which ignited from the sun's hot rays shining upon it through a window. Experiments have proven that rags saturated with oil used in wiping up floors have burst into flames when there was no heat or fire around. If these rags and dusters are used in the home, school, church, or office they should be kept in metal receptacles that are ventilated.

Never make a bonfire or a fire to burn rubbish within twenty feet of any building or near a wooden fence or shed. Never make a fire to burn rubbish on a windy day. Great conflagrations have been caused by "sparks" from bonfires and from "burning rubbish." Clean out the attics and cellars of your home at least every spring and fall. All attics should have windows so they can be ventilated.

Have the old dead leaves and rubbish around your house cleaned away and burned. Many fires have been caused by a careless man or boy throwing a lighted match or cigar or cigarette stub in a yard, or along a sidewalk where old leaves, grass, and rubbish had accumulated. It is best, where it is convenient, to have rubbish and waste hauled away from your premises and disposed of by some one who makes that his business, but if this can not be done, then burn it out away from buildings and see that no sparks fly or fall where they will start a fire.

QUESTIONS.

What causes combustion? What causes spontaneous combustion? Does spontaneous combustion cause many fires in barns? Why? Relate the experience of a painter. What should you never allow to accumulate in kitchens, attics, closets, cellars, barns, sheds, and alleyways? What will heat cause in greasy, oily rags? Will oily, greasy rags burn if there is no heat near them? Will they catch fire in a damp cellar with no heat or fire around? Why is the blaze likely to get a good start? If old rubbish and rags can not be burned at once, what should be done with them? Where should the cans containing combustible material be placed? Is it dangerous to make a fire near a house or wooden shed or fence? Is such a fire dangerous on a windy

day? Why? How often should you clean out the attics and cellars of your home? Are floor oils and dust preventives dangerous from a fire standpoint? Why? What should you do when through using these rags? What is almost sure to happen if you throw them in the rubbish pile? Are rags saturated with kerosene, gasoline, and naphtha dangerous? What should be provided in every home and public building for old waste and oily rags? What is a good rule to enforce at home? Do "dustless dusters" contain any dangerous properties? What happened from one of these? Where should they always be kept when not in use if they can not be burned?

LESSON 7.

Sparks.

Burning sparks cause a great many fires. A spark is a small piece of burning carbon or charcoal which escapes from some burning substance. It separates from the substance which is burning and carries fire wherever it falls. Very tiny sparks will stay hot only a short time and usually die or turn cold before they fall or alight. Large, heavy sparks keep fire for some time and alight while still red and hot and set fire to any inflammable substance they may fall upon. Burning wood and soft coal throw off numerous sparks. Soot burning out in chimneys forms showers of sparks. Burning rubbish and bonfires throw out light inflammable sparks which do a great deal of damage. The following clipping tells of a disastrous fire caused from "sparks" while burning rubbish.

A few days ago the papers contained the following brief note regarding a small Texas town:

"In the conflagration which visited Whitewright, forty-two business buildings and twenty-six residences were destroyed. The loss is said to be \$371,000, with insurance of \$222,000. If these figures are correct, the uninsured loss amounts to \$149,000. The cause of the fire was the burning of trash in the rear of his store by a Whitewright merchant, who did this notwithstanding that a brisk wind was blowing at the time.

"Here is another illustration of the unrestrained carelessness of our liberty-loving citizens. It is quite certain that such carelessness would not have been permitted anywhere on the continent of Europe, where the fire loss per capita is one-eighth of what it is in the United

States. This one heedless act on the part of the Whitewright merchant not only caused a great loss to the community but probably resulted in permanent bankruptcy for some who had before been fairly well provided with the necessities of life."

Sparks from chimneys falling upon shingle roofs and causing fires are recorded daily.

Sparks from engines do great damage every year. They have caused forest fires where thousands of trees have been burned to the ground. Railroad companies should use fuel oil for their engines when possible. This would do away with the fire hazard of "sparks" from engine fires. Hundreds of thousands of dollars could be saved if every engine and chimney were equipped with a "spark preventer." There are several good ones upon the market.

Watch sparks when you see them flying from any fire; they are liable to cause a conflagration.

A fire is called a conflagration when a number of buildings burn, one setting fire to the other. Firemen have to constantly watch this danger when fighting fires. They try and confine the blaze to the building in which it originally started, but many times they can not do this, and the flames spread and jump from building to building until whole blocks and even towns have been destroyed.

Burning sparks are always dangerous. Watch them. Sparks flying from matches cause fires every day.

USE ONLY SAFETY MATCHES.

QUESTIONS.

Do burning sparks cause many fires? What is a spark? Which are the most dangerous, small or large sparks? In what town did sparks from burning rubbish cause a great fire? Why was this a careless, avoidable fire? Do sparks from chimneys and engines cause much damage? What could be used on chimneys and engines to prevent sparks escaping? What is a conflagration? What kind of matches should you use?

LESSON 8.

Gasoline, Benzine, Naphtha, Gas.

You have been told in another lesson how gasoline is obtained and what kind of a product it is.

In this lesson we want to tell you what a deadly explosive it is so

that you will never handle it except when absolutely necessary, and then with the greatest care.

Gasoline is a valuable product in many ways. It is used to run great machines of various kinds. Gasoline engines do not cause as many disastrous fires as does gasoline used in the home. It is true numerous fires happen in garages and automobiles from the careless use and handling of gasoline, but statistics prove that damage done by gasoline engines is not so frequent or fatal to life as the many careless practices it is put to in the home.

We use gasoline in our homes principally for lighting, cooking and cleaning purposes. When a fire starts from any one of these causes some person is invariably injured or burned to death. A gasoline lighting plant installed in a house is very dangerous. Gasoline is like a treacherous thief, always lurking around to rob or destroy. Gasoline vapor is heavier than air, consequently it falls to the floor and hovers around until it can find "fire." Gasoline vapor takes up 130 times as much space as the gasoline from which it comes.

The gasoline stove in the past forty years has added materially to the enormous annual fire waste of this country. Thousands of homes are destroyed annually and millions of dollars' worth of property lost by fires resulting from the careless use of gasoline. Every housewife should have her dealer show and explain to her fully just how to generate and control her gasoline stove.

No person should be allowed to light a gasoline stove unless they thoroughly understand it. We can not give directions for lighting them here for all stoves are not alike. One thing, however, is always true, and one caution always applicable and that is: **NEVER ATTEMPT TO FILL THE TANK OF A GASOLINE STOVE WHILE THE STOVE IS BURNING OR WHILE THERE IS ANY FIRE OR LIGHT NEAR IT.**

Do not keep the gasoline can in the house. Keep it out doors. Do not use the same kind of a looking can for your gasoline that you do for your kerosene, you may mistake it sometime and fill your lamps with gasoline. Such a mistake has caused some terrible fires. Have your gasoline can painted red.

The burners of your gasoline stove should be at least two feet from the floor or any table or bench. Your gasoline stove should have a metal protection under it the same as your cook stove. Do not have papers, rags, or other inflammable material around your stove. If a

little gasoline should run over when turning on your stove it will blaze up when you light the burner and probably set fire to any article near it. Keep your stove away from drafts. If the wind should blow the fire out and you did not notice it the burner would leak and the deadly fumes go all over the room; just the tiny flame from a match would then set your home on fire. One part of gasoline vapor mixed with six parts of air will cause an explosion. Be very careful when filling the stove that you do not spill any gasoline. If you do, never strike a match until every trace of it is gone and all the vapor out of the room. Open the doors and windows to let the vapor out. The safest gasoline stoves are those where, if the burners are lighted, they automatically go out when you tip over the tank to fill it.

Cleaning clothing, feathers, woodwork, beds, etc., with gasoline has been the cause of many fires.

Recently a milliner was severely burned by washing plumes in gasoline. She briskly dipped the plumes in and out of it, causing a friction which ignited the gasoline. She was badly burned about the face and arms. Never rub clothing between your hands when cleaning with gasoline; the friction may ignite it.

Unless absolutely necessary never clean or wash clothing with gasoline in the house; if you must, have the doors and windows open. It is never really necessary to use gasoline for cleaning purposes. Use soap and water; this is the safest and best, or send the articles away to a cleaning establishment.

Recently a girl cleaned a waist with gasoline; when she was through she emptied the gasoline in a waste bucket in the kitchen. Her mother later in the evening struck a match, lighted the gas, and threw the burning match into the waste pail. Immediately fire blazed up, caught the mother's clothing, and she was burned to death, and the daughter was severely burned while trying to save her.

Never throw gasoline in buckets or in the sink. Throw it out doors on the damp ground where it will evaporate and disappear.

Another fire occurred where a woman cleaned a dress with gasoline and hung it near a stove to dry. The fumes penetrated the room, ignited from the fire in the stove, and the house was destroyed.

Never hang clothing that has been cleaned in gasoline in the house to dry. Hang it out doors.

We could give hundreds of instances of fearful fatal gasoline fires. You can not be too careful when handling this highly explosive fluid.

Men should use great care in their garages and when filling their automobiles; persons owning automobiles become so used to handling gasoline they are apt to grow careless.

Do not clean your beds, floors, or woodwork with gasoline. Your rooms are sure to become filled with the vapor, and you are in imminent danger of a fire until all trace of the gasoline in the air is gone.

If you detect gasoline or gas leaking in your house open every window and door at once; find the leak (never with artificial light) and stop it. Great care should be used in turning off the gas as well as gasoline stoves and lights. The deadly fumes of gas will kill you in a short time if inhaled into your lungs. Never blow out a gas or gasoline light; always turn them off securely.

Do not use stove polish or other cleaning or polishing compounds that contain gasoline, naphtha or other dangerous explosives. A woman used a naphtha stove polish to clean her stove while it was warm, despite the fact that the wrapper on the preparation plainly read "to be used only when the stove is COLD." The heat ignited the polish, and the woman was so severely burned about the face that she lost her eyesight. Her three-months-old baby who was lying near the stove in a little carriage was also badly burned. It is better not to use any preparation that contains combustible ingredients, so that even if we forget the directions we will not be injured. There are other substitutes for cleaning, polishing, and dusting that do not contain explosives, and they are the only safe ones to be used in the home.

One quart of gasoline makes about 500 feet of air explosive.

It is more dangerous than gunpowder. Gunpowder keeps its place and waits until you bring fire near it. Gasoline rushes to meet fire and ignite it.

Gas, while probably one of the safest methods for heating, lighting and cooking purposes, causes a number of fires every year, and we should never allow ourselves to grow careless in managing it. The open gas jet, especially the side bracket style, is dangerous. It should always be protected by wire cages or globes. Curtains, hats and other articles coming close to the flame will take fire. Watch that your gas stoves or lights are not in a strong draft. If they BLOW out while turned on the escaping gas may cause serious damage. If a gas pipe leaks, open all the doors and windows and try to find the leak and stop it up with wood, soap or something until it can be permanently

repaired. Do not light a light until the gas fumes are all out of the room or there will be an explosion.

The gasoline iron has caused many fires. Use them exactly as directed and if they refuse to work properly or if they act queerly do not use them until the defect is remedied.

A child under fifteen years old should not handle gasoline in any manner. They should not use a gasoline stove, should not clean clothing or have any duties where they must use the dangerous article.

Gasoline lamps are also very dangerous unless we are careful—never forgetting how treacherous they are. Directions always come with machines of this sort, and we should read and heed them.

QUESTIONS.

What kind of a product is gasoline? What is it used for? What is it principally used for in homes? Is gasoline vapor heavier than air? Does gasoline vapor take up more volume than the gasoline from which it comes? Is a gasoline stove dangerous? Should any one use a gasoline stove they do not understand how to regulate? What is one rule always to be followed in using a gasoline stove? Where should the supply of gasoline be kept? Should the gasoline and kerosene cans look alike or be kept together? Why not? What care should be used regulating the gasoline stove? How many parts of air mixed with one part of gasoline will cause an explosion if there is a light or fire around? What are the safest kinds of gasoline stoves? Is gasoline dangerous to use for cleaning clothes? What happened to a milliner who was washing a plume in gasoline? What happened when a woman struck a match and threw it in a bucket where gasoline had also been thrown? What happened when a woman hung a dress cleaned with gasoline near a stove to dry? Should gasoline be used for cleaning beds, floors, etc.

If you detect gasoline vapor in your house, what is the first thing you should do? What should you do in case of a gasoline fire, smother or throw water on it? Why should you not throw water on it? Are stove polishes containing naphtha dangerous? How many feet of air will a quart of gasoline make explosive? Is it more dangerous than gunpowder? Why? Does gasoline evaporate?

How should gasoline be kept in large quantities? Should children use gasoline in any way? Do gasoline irons ever explode? Are gasoline lamps dangerous?

LESSON 9.

Gasoline Used by Dealers and Automobile Owners.

Gasoline evaporates most rapidly and therefore should be kept in tightly closed receptacles in a cool place. Dealers and automobile owners who handle and store it in large quantities should keep it in safe underground tanks where the gasoline can be run into the tanks through a pipe and pumped out for use with a pump. These tanks should be buried at least three feet underground. The best of these tanks are so constructed that when you are through pumping the gasoline what is left in the pump runs back into the tank so that there is no possible danger (even if the building should take fire) of the gasoline exploding or adding to the blaze. These pumps should be made and guarded so that no one but the owner or his employe can pump out the gasoline. Children should not be allowed to touch the pump.

QUESTIONS.

Do many fires occur in automobiles and automobile garages?

What care should be used with gas for lighting, heating and cooking purposes?

LESSON 10.

Fire Extinguishers.

Every home should have at least one **three-gallon approved fire-extinguisher** on each floor; and every school and church should be amply provided with **approved fire-extinguishers**. Be sure they are **APPROVED** by some one who is an authority on fire-extinguishers, for some kinds are worthless, and people do not discover this until there is a fire and they need them; then it is too late. Any insurance company will tell you what are the approved fire-extinguishers. Before installing one in your home have your parents, if they do not know any person who is an authority on these matters, write to the insurance company that carries the insurance on your home. They will be glad to tell you what kind and how and where to get a good fire-extinguisher that will work and do its duty when you need it. There are many different kinds on the market today, and they are sold so reasonably cheap that every home should have one. Ordinary ones hold all the way from two and one-half gallons to five gallons. The three-gallon ones are best for home use and are large enough for churches and schools. The chemical extinguisher that is most popular today is a copper tank with a hose attached for the purpose of directing the

stream of water. The tank holds about three gallons of water into which has been put some bi-carbonate of soda. A small bottle of sulphuric acid is suspended within the tank with a loose stopper so that when the extinguisher is turned upside down, the sulphuric acid is mixed with the soda solution and the chemical reaction produces carbonic acid gas. This creates considerable pressure and propels the water through the hose with great force; then, too, carbonic acid gas is a non-supporter of combustion, and when carried along with the water helps to extinguish the fire, a result to which the sodium salt in the solution also contributes. The chemical extinguishers for use in homes, churches, and schools should be as simple and easy to use as possible. Poorly constructed machines or complicated ones are worse than useless in time of fire, for one is liable to waste valuable time on them because they think they will work all right, when if they did not have one they would be employing other means of extinguishing the fire. The most simple and best extinguisher is one that merely requires to be turned upside down to mix the acid with the water and soda. When the extinguisher is upset the lead stopper falls from the bottle containing the acid and is so arranged that it acts as a throttle, thus limiting the flow of acid and providing an automatic regular feed, thereby removing the danger from high pressure suddenly caused by mixing all the acid at once.

All fire-extinguishers, wherever they may be installed, should be tested at least once a year, preferably every six months.

"The dreadful fire at the Iroquois theatre in Chicago, when first starting, might have been put out had the fire-extinguisher, which had only a few weeks before been installed in the building, been any good. It was not an approved extinguisher and when thrown on the flames had no more effect than a dash of common water. An expert authority on fire-extinguishing chemicals has declared that the man who sold the extinguisher had mixed 10 cents worth of common soda with three gallons of water and sold it for a **Fire Extinguisher**; and this fraud, to make an enormous profit on a worthless article, sacrificed the lives of over 600 people."

Tell your parents they should have at least one fire-extinguisher on each floor of your home. Tell them never to buy an extinguisher unless it is marked approved by the National Board of Fire Underwriters. The National Board of Fire Underwriters test each fire-extinguisher in their laboratories before they give it the mark of ap-

proval. These chemical extinguishers can be recharged and filled in one's home if the contents have been emptied in a fire. There are other extinguishers on the market besides the ones made as above described. The best advice we can give you here in regard to them is that you see they have been tested and approved by the National Board of Fire Underwriters. There are so many good liquid and powder extinguishers that are effective there is no excuse why every household should not have one. They are inexpensive to install and invaluable in case of fire.

In the country every house, barn, and shed should have one. Especially should every precaution be taken where you can not obtain the service of a fire department.

Fire pails are probably the oldest method of extinguishing fires. They are simple and dependable if kept filled and in their proper places. They should be placed on shelves, hooks, or floors and not used for any other purpose. They should be placed where fire is most likely to occur; and should be refilled once a week. If left where they are liable to freeze in winter, calcium chloride should be put in the water. It is better than salt and does not injure metal like salt does. It costs only about a cent a pound.

If you live in the country it may be well to have a cask or barrel of water for fire-extinguishing purposes. The barrel should be of good oak and hold at least 25 gallons. Paint on it the words "For Fire Only" and do not use it for any other purpose. This barrel should be kept full of water and covered. Fire pails should be placed near it. Every home, whether in the country or not, should have a ladder that will reach to the second story or roof. If all these precautions were heeded many fires could be extinguished in their incipiency. Farm fires are nearly always total losses, but if each farmer would take all necessary precautions and equip his barns and home with **fire-extinguishers**, pails, barrels, and ladders he could himself put a fire out if discovered in time.

Children, be sure and impress upon your parents the fact that your home should be provided with **FIRE EXTINGUISHERS**.

QUESTIONS

What should every home, church, and school have? Where and how can you get a good approved extinguisher? What is a chemical fire-extinguisher and what does it contain? How often should they be

tested? What kind should you buy? What are fire pails for, and where should they be kept? What should every country home have? What are you going to tell your parents?

LESSON 11.

Fire Insurance.

No insurance company wants your house and household goods to burn. They are as interested in saving your property from fire as you are. If your house burns down the insurance company will have to pay your parents a much greater amount of money than your parents had to pay the insurance company to purchase the insurance from them. If your parents have their house and household goods insured for \$2,000 it will cost them about \$6, \$8, or maybe \$10 per year for an insurance policy which is a document guaranting to pay them \$2,000 if their home is destroyed by fire within one year from date of policy. Just think of the chances the company takes. If the property burns down the company pays \$2,000, and all they receive for the protection they sold was, at the very highest estimate, \$10. But an insurance company is a corporation doing a legitimate business, and can not continue to do business at a loss. If too great a number of homes should be destroyed by fire and they were called upon to pay numerous losses of \$2,000 each—you can readily see, as all the money they required for each risk was only \$10, that they would soon run out of capital. When the company sells the insurance they take chances that they will collect a great deal more in premiums than they will have to pay out in costs. There are years when insurance companies pay out more in losses, in some states, than they receive in premiums; but such mammoth and well-organized concerns are they that if the losses are not too great, or do not continue for too many consecutive years, they can tide over the temporary reverses by means of paying investments in which they have their capital stock invested. An insurance company, aside from its insurance writing, is conducted like a great banking business, so that years when they realize but 1, 2, or 3 per cent from their insurance business they are not bankrupt, but have a sufficient income from other investments to tide them over. Every time a person carrying insurance has a fire, even though it be from gross carelessness, a great many other people, in fact all the people carrying fire insurance, and having no fire at all, have to help pay the money back in premiums to the insurance company so that it can pay

these losses. Hence the insurance company collects from every one carrying insurance and they take the people's money who have no fire loss, but have to pay for their policies just the same, and with this money, collected as premiums from their policyholders, they reimburse the persons having fires. The more losses by fire that this country sustains that much more must each individual pay in rates for his insurance, so you can readily see how this loss ultimately comes back and is paid by the people at large after all. The insurance company merely acts as a great arbitrator, a collector, a distributor; and there is no other one business in this country today of such magnitude and such universal necessity as fire insurance. Without this great distributor and collector a great conflagration would cripple business, cause tremendous failures in the commercial world, and untold hardship to the home owner. But even though insurance hands over to us the money with which to build and purchase again, the property that was destroyed, that same lumber, brick, that same labor and material which furnished and supplied and built that which was destroyed, can not be created again, can not be replaced; it is gone forever, irrevocably gone; and the world and the nation are just that much poorer. Money could not reproduce that same house and what it was built of. We can build up new from new materials, but that which is a heap of ashes and dust at your feet can never be shaped into a stately edifice or article again.

Fire is a dreadful calamity however you look at it. No other element consumes so thoroughly and destroys so entirely.

QUESTIONS

Does the insurance company want to protect your home and household goods? Are they interested in saving property from fire? About how much would you have to pay for a policy of insurance amounting to \$2,000? What is an insurance company? Tell how they collect money with which to pay losses? Do they sometimes pay out more in losses than they collect in premiums? Could the commercial world get along without insurance? Is property destroyed by fire gone forever? What does the money the insurance companies pay us enable us to do?

LESSON 12.

Fire Marshal Law of Nebraska Analyzed.

Years ago in the United States arson was punishable by death.

In sections 2, 3 and 4 of the Fire Commission Law of Nebraska, you will learn just how the Fire Marshal and his assistants try to stop incendiaryism. First the law requires that all fire chiefs throughout the state must report every fire in their locality to the office of the Fire Marshal, at the State Capitol, each report to give the date of fire, name of owner and occupant of property destroyed, value of property, how much insurance was carried on it, and how much damage was caused by fire. Then the fire chief states what, in his opinion, caused the fire. If he thinks it was of incendiary origin, and so notes on his report, the State Fire Commissioner or Marshal immediately starts an investigation as per further sections of the law, and if sufficient evidence is obtained upon which to file a complaint, the perpetrator of the crime is arrested and brought to trial.

To reduce the fire loss of the country, officials and students of the problem have discovered that they must stop fires before they occur instead of waiting to put them out after they have started. Years ago scarcely any thought was given to this important matter. All available money was spent for fire apparatus and equipments to be used in fighting fires, but not a dollar or thought was expended in preventing them.

Until recently New York city was spending \$15,000,000 per year to fight fires that had already started and was spending \$15,000 per year to prevent them. How foolish this was. Chicago spends about \$3,000,000 annually for the maintenance of its fire department, and fire losses cost it about \$5,000,000. Would it not be better to spend money and effort in preventing this terrific loss? Do you not see how illogical it is to continually work to stop something that your own carelessness or indifference is continually starting. Such irresponsible actions and habits are really a reflection on our intelligence. Every fire is small at first, but no one can tell at just what stage it will stop. They can never tell how far it may spread or how many lives it may destroy. Would it not be better to prevent every fire and take no chances of destroying anything? This is what the Fire Marshal or Fire Commission Departments try to do. The initiative step to be taken in this movement would naturally be to build every building so safely that there would be little danger of a fire starting, but as it would be impossible to tear down every building susceptible to fire the Fire Marshal law requires that its department shall do the next best thing, and go around and investigate buildings, compelling own-

ers and occupants to remove dangerous conditions such as old rubbish, inflammable material, explosives, and all combustible properties from their premises. They require the electrical wiring to be safe, stoves to have protection underneath, stovepipes to be protected when running through wood partitions or near ceilings, furnace pipes to be protected with asbestos, ashes to be kept in safe places, and they pay particular attention to defective chimneys and flues, because this latter "fire danger" causes two-thirds of the fires that usually occur in dwellings.

They have authority under their law to enter any premises and compel the owner to comply with the law. This was a decisively effective step along fire-prevention lines. It obviates many fires.

If the Fire Marshal or his deputies find that a building is in such a dilapidated condition and is such a serious fire hazard that it would be an impossibility to repair it, they can condemn it (after due process of law) and compel the owner to tear it down and remove it. This is necessary many times in order to remove the danger of a conflagration which might destroy many neighboring buildings.

In fighting fires there are two situations to be taken into consideration; the local fire and the conflagration; therefore we should well consider conditions that are a menace to adjoining property, and one bad building should not be allowed to endanger other property.

Because the insurance companies understand better than the ordinary layman what the tremendous fire loss of the country is and because it vitally affects them, and they know it (**it affects every layman, every man, woman, and child in the country, but few of them realize it**), they are interested in reducing the fire loss to the minimum.

The Fire Commission Department pays the fire chiefs of the volunteer fire departments for each fire reported and investigated, provided they receive no compensation from their respective towns for their services as such chiefs.

Fire Marshal Departments under the management of able, conscientious, interested officers should reduce the fire losses in their states hundreds of thousands of dollars annually. They have jurisdiction over careless and criminal fires, and it is from these two sources that nine-tenths of the fires of the United States originate. Of course the corps of assistants these departments have are not able to correct all fire dangers; they must have the co-operation and assistance of

every man, woman and child in the different cities and towns of the state. The country folk, too, must do their part.

Every boy or girl in school can aid very materially. They can talk over these fire-prevention matters with their parents and associates and inform them of fire dangers lurking about, which they will gladly help remove or obliterate. Your parents or neighbors did not have the advantages you are receiving of having fire-protection taught them when they went to school. Many things you are now learning were never brought to their attention.

Organize a fire-protection association in your school—have the pupils become members and see what an amount of good you can accomplish in one year.

After years of experience in trying to exterminate the crime of arson and thereby curtail the nation's enormous fire loss, the legislatures and officials of different states realized they would have to **educate the people in the science of fire-prevention** before much headway could be gained in reducing the fire loss.

School children of the present day are the first ones to receive this privilege, and it is your good work now and in the future along these lines that will show our nation the great good derived from teaching school children simple and thorough methods of preventing and avoiding fires. With this end in view, the legislature of Nebraska enacted a state law setting aside the first Friday in November to be known as "State Fire Day." This day to be observed in all schools in the state with appropriate exercises and subjects. Section 2 of the law makes it compulsory to teach fire-prevention in every public, private, and parochial school in the state.

Every state in the Union should have such a law, and should provide ways and means whereby its school children could receive this valuable instruction and information.

QUESTIONS

Why have a number of states enacted fire marshal laws? How many states have this law? Name them. What is the first and most important step in fire-prevention? Is it logical to expend more money and energy in extinguishing fires than in preventing them? How much does Chicago and New York spend to fight fires after they have started? How much do they spend to prevent fires from starting? What are the Fire Marshal or Fire Commission Departments trying

to do to prevent fires from starting? Do dangerous buildings breed conflagrations? Are the insurance companies benefiting the people of the state at large as well as themselves by maintaining this department? How do the fire chiefs of the state assist this department? Can great good be accomplished through the Fire Commission Departments? Can they do all this work alone? Who can assist them? How? What will reduce, more than anything else, the fire losses of this country? Why will educating the people to be careful and prudent in dealing with fire, matches and inflammable materials reduce the fire loss? Why can school children now do more along these lines than their parents or older friends? Why was the "State Fire Day" law enacted? Are the school children of the present day fortunate in having these privileges? Does the "State Fire Day" law make it compulsory to teach fire prevention in schools? Should every state have such a law?

TO THE TEACHER

We have here arranged some suitable programs for the different grades for Fire Day. It will be instructive and interesting for the children to look up the different subjects as the Chicago, Baltimore, Iroquois theatre, San Francisco, Moscow, London, Constantinople, and other fires.

They can gather most interesting matter on the primitive and present day methods of fighting fire, prairie and forest fires, fires at sea, fire worshipers, fire symbolism, and the story of Mrs. Longfellow's death. The teacher can help with other subjects to make a most entertaining program, and we beg to ask her to use every means to interest the children in the lessons on fire prevention.

KINDERGARTEN, FIRST AND SECOND GRADES

Danger in bonfires.
Jack O'Lanterns.
Christmas Tree Candles.
Firemen's Song and Games.
Talk About Matches.

THIRD AND FOURTH GRADES.

Match Fires.
Story of Mrs. Longfellow's Death.
Matches in Boy's Pockets.
Individuality of Each Child in Preventing Fires.

FIFTH AND SIXTH GRADES.

The Individuality of Each Child in Preventing Fire.
Fire Worshipers.
Debate—Resolved, That the Use of Explosives Is Not Necessary in Patriotic Celebrations.
The Proper Method of Kindling Fire.
Matches, Their Use and Abuse.
The Lighting Christmas Tree.
Defective Flues.
Debate—Resolved, That it is Wiser to Prevent Fires Than to Fight Them When Started.

SEVENTH AND EIGHTH GRADES.

Debate—Resolved, That the Life of the Fireman is More Perilous Than That of a Policeman.

Story of the Chicago Fire.

Story of the Baltimore Fire.

The Burning of Rome.

Fires of Biblical History.

Causes of Fire and How to Avoid Them.

Other Great Fires of the World.

The Primitive and Present Day Methods of Fire Fighting.

Prairie Fires.

Forest Fires.

Fires at Sea.

Danger in the Use of Gasoline.

Danger in the Ash Heap.

Fire Insurance.

Shelley's Prometheus Bound.

The fire drill may either open or close the program. We might say at this time that we trust all teachers to comply with the requirements of giving the fire drill regularly in their schools.

Note—The teacher will please review the lessons in previous grades regarding Christmas trees, to the pupils during the month of December. In June, before school is out, she will please give them a review of the previous lessons on observing the Fourth of July without the use of dangerous fireworks. We believe these subjects have been gone into very thoroughly in former grades, and the children will readily recall them when they are reviewed.

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